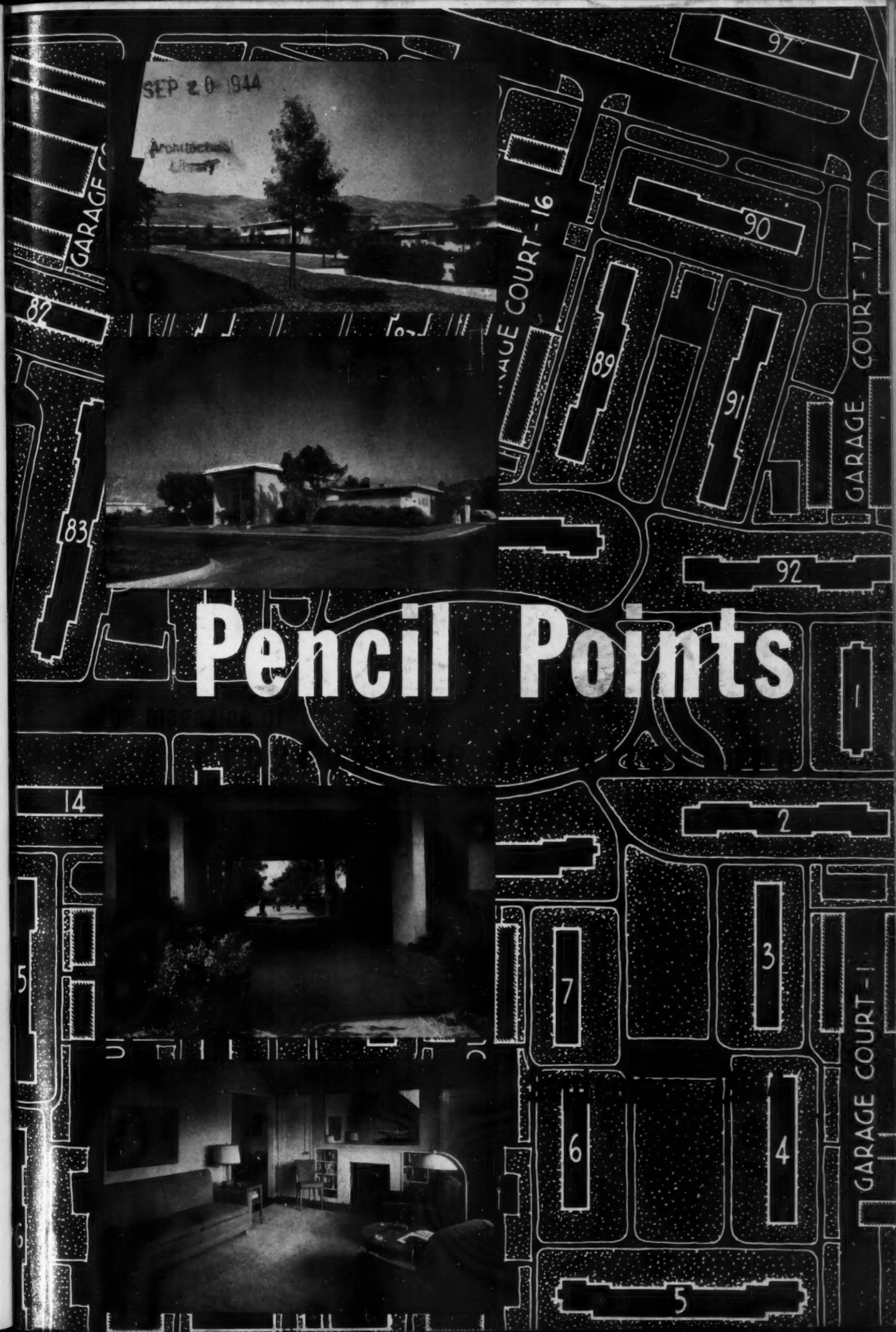

Pencil Points

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Pencil Points

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Vice President; Francis Turner, Vice President; Gilbert E. Cochran, Vice President; William P. Wisnor, Vice President. Executive and editorial offices: 330 West 42nd St., New York 18, N. Y. Subscriptions payable in advance: 1 year, $3.00; 2 years, $5.00 in U. S. and Possessions, Canada, Cuba, Mexico, Central and South America; 1 year, $5.00 in all other countries. Single copies, $1.00. Remittances must be by International or American Ex-

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Entered as second class matter March 25, 1944, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Volume XXV No. 9, September 1944. Indexed in Art Index.

September, 1944

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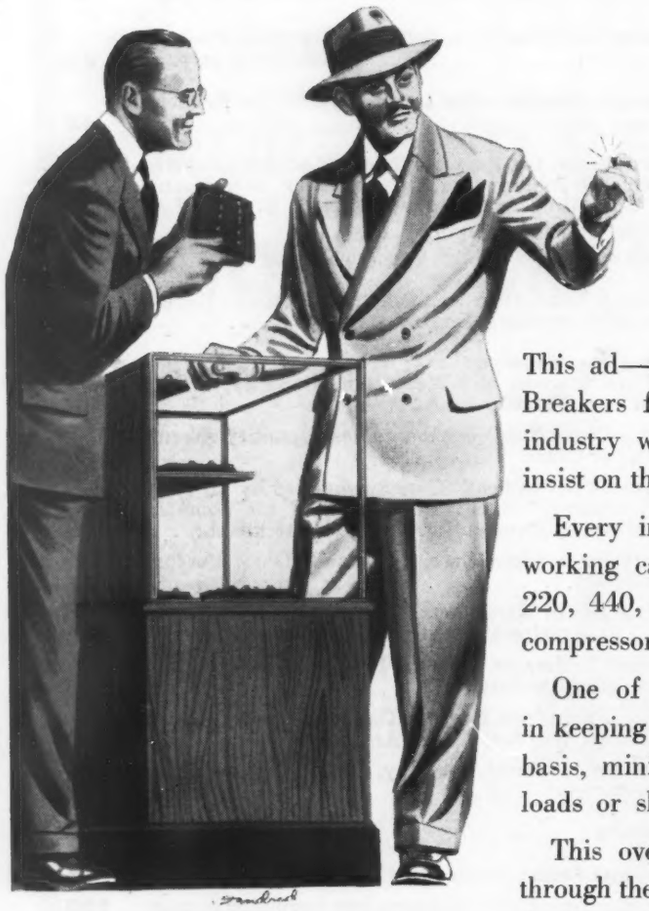
Cover: Composition by Costantino Nivola: Plot Plan and Photos of Baldwin Hills Village, Los Angeles, Calif.

IF you're not interested in bargains . . . or don't care to get "more for less"



don't read this ad

This ad—second in a series on "De-ion" (fuseless) Circuit Breakers for 1944—is addressed to those men in American industry who are genuinely interested in bargains . . . who insist on the best . . . who demand more for less.

Every industry, large or small, has a great portion of its working capital invested in electrical equipment served by 220, 440, or 550-volt circuits. This includes motors, welders, compressors, machine tools.

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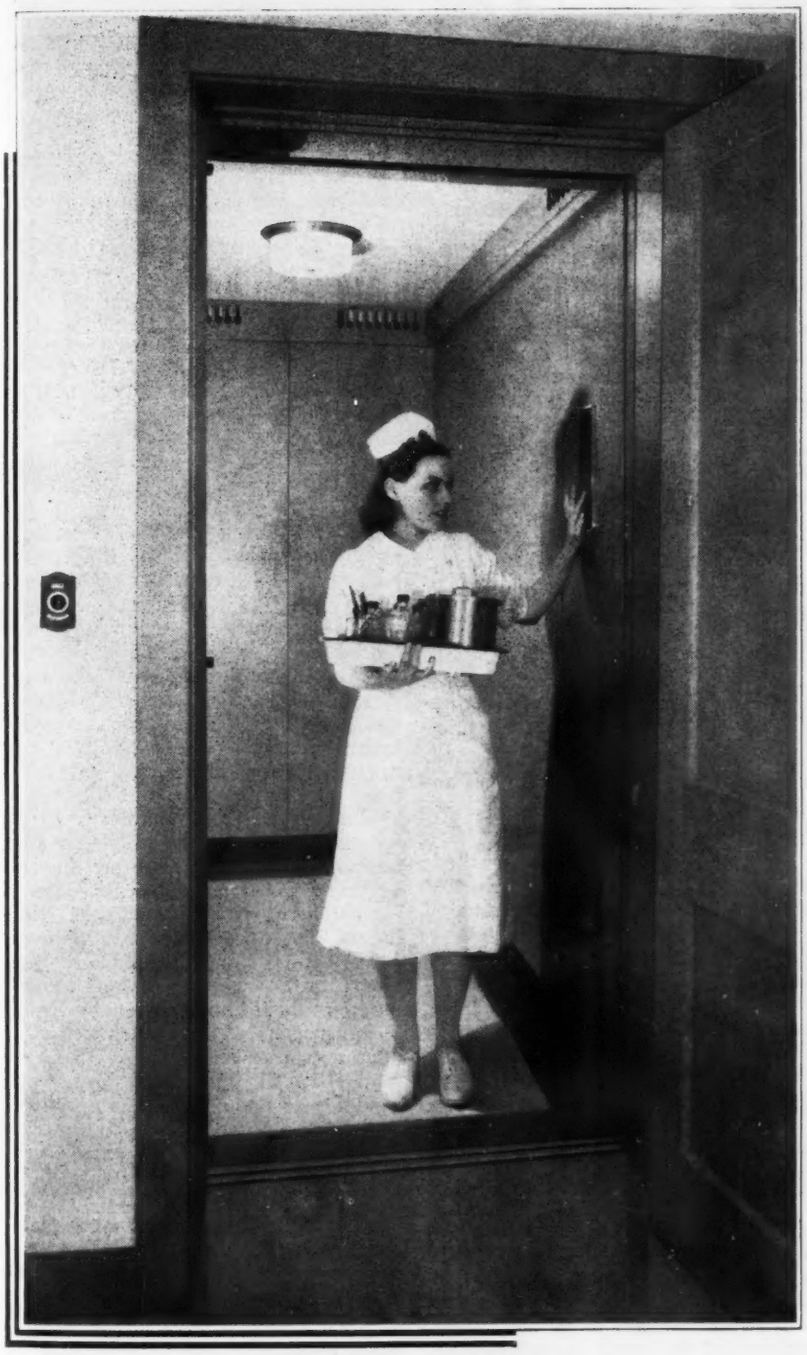

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Views

Opinions from readers

Remarks from the editors

Changes of address

Destructive Criticism of the "Seven Myths"

Dear Editor:

"The Seven Myths of Housing," by Nathan Straus, former Administrator of the United States Housing Authority, deserves more destructive criticism than it has received so far. It includes, for instance, statements like the following: "The loans which the USHA made to localities for financing the capital development of projects are absolutely returnable—every dollar—with interest. They do not cost the public a penny, but in fact yield a small interest profit." Straus went on to contradict this statement by saying that the only costs to the Federal government were the USHA annual contributions. He should never have made the first statement at all. "They do not cost the public a penny" is an example of unexplained and unproved propaganda. Another Straus statement: "A dollar spent by the Federal government for housing subsidies, however, produces about forty dollars' worth of new construction." We should like to see the proof.

We need to know more about the slums, how many people are getting a new deal and how many are getting a raw deal. Straus says that the slums are highly profitable to their owners, and that they are owned by powerful organized groups. He says that "slum ownership is an astonishingly profitable form of business," and that an income of 15% to 30% is considered normal. He is apparently still thinking of New York City's Trinity Church ownership of slum properties 50 years ago. And John F. Gowen, in PENCIL POINTS for April 1944, says: "Private owners of slums find them too profitable to warrant improvement, preferring to exploit their tenants and let the community pay the cost of disease and poverty." On the other hand, an up-to-date sampling of Cambridge, Massachusetts houses assessed for $4,000 or less showed that they were nearly all owned by the occupant and very few owned more than one house. As to whether slum properties are "highly profitable," it would be interesting to find out whether the banks which have taken over some of these slum houses have found them to be profitable and whether they are now investing new money in "highly profitable" slums.

We should not accept without question the repeated statements in the "Seven Myths" which give the impression that the slums are owned by powerful and well financed groups who subsidized housing so as to protect their exorbitant profits. The "Seven Myths" uses such expressions as: "a cohesive and very vocal group," "their views are invariably well financed and their arguments vociferous. Who are they? Obviously, the owners of slum properties, the real estate boards, the banks that hold mortgages on slum tenements and on slum shacks—," "powerful, reactionary lobby of the United States Savings and Loan League," "the wealthy aggregation of real estate interests, the National Association of Real Estate Boards under the leadership of one of the ablest lobbyists in Washington," "But slums are valuable because they are profitable—," "slums are still considered excellent investments in most communities in this country," "This large sum eventually found its way into the pockets of the landlords of the slums," "The persistence of this myth is undoubtedly due to the propaganda of the slum owners," "The slum owners and their friends can provide campaign funds and will not hesitate to do so." We should like to see facts and figures to support these statements.

Another statement: "The oft repeated statement that the slum-dweller creates the slums is a libel on millions of American families whose only sin is that they must live in indecent housing unless we provide decent housing within their means." This sounds like a politician running for office from a slum district rather than an attempt to find out the real troubles and to do something about them. Shiftlessness, laziness and drunkenness have something to do with creating poverty and poverty has something to do with creating slums.

Another statement, "The myth that the slum-dweller creates the slums is perhaps the oldest and most deep rooted of all the erroneous beliefs that serve to confuse the subject of housing. The persistence of this myth is undoubtedly due to the propaganda of the slum-owners," completely ignores the fact that the slums may be largely owned by the occupants who are not likely to circulate the idea that they themselves created the slums. On the other hand, Straus ignores the possibility that the slum-dweller may be in part a creator of the slums. We need to know more about slums and slum-dwellers other than those of New York City, which are not at all typical.

The "Seven Myths" is full of generalizations which cannot be accepted as a whole, and of comparisons of non-comparable undertakings. For instance, it states: "The cost of construction of public housing under the USHA program has been about one-quarter less than the average cost of similar housing produced by private enterprise, as is shown by the following table:

	USHA	Private
Net construction cost	$2,720	$3,601
Over-all cost of new housing	4,307	5,332

The figures cited for public housing (USHA) are the average cost per dwelling unit (home) of all dwelling units comprised in the first 399 projects erected by local authorities under the USHA program. The figures cited for private housing are the average costs per dwelling unit of all houses erected with the aid of FHA insurance in the period 1938 through 1940." This comparison is, of course, entirely meaningless because there is a great variety in the land costs, number of units in a project, number of rooms in a dwelling unit, type of construction and labor costs in the public housing projects themselves. There is also a great variety of elements in the cost of private housing. As between the two types of housing, the public projects are generally large contracts, including in some cases hundreds of dwelling units, whereas private housing is predominantly a matter of single units or a relatively small number of units in each development. Comparisons of average costs are, therefore, misleading. What we need are fair comparisons of costs of *similar* developments paid for by private investors with 20- or 30-year amortization as against public housing with 60-year amortization, the costs *after the interest is all paid* in each case. Housing of insurance companies built with 100% equity money should also be included in the comparisons and the comparisons should not be made by Federal housing officials. In this connection, the administrative costs of the USHA and the FPHA should be investigated when working at their maximum activity in order to discover how much that kind of overhead added to the cost of each unit.

CHARLES W. KILLAM, F.A.I.A.,
Professor of Architecture
Harvard University
Cambridge, Mass.

Of What Is the General Welfare a Product?

Dear Editor:

A word of congratulation on the presentation of the case for public housing in your June number. You presented something that had to be said and it was both clear and forceful.

I hope the architects of the country get a bit excited about this. I have been in close contact with the fight against public housing and I regret to say that only a few architects in Washington had the courage to appear before the Committee of Congress in support of public housing and of our own profession which was being attacked at the same time. In too many instances I found an attitude of unwillingness to stick out one's neck, prompted by the idea that the private developer is the architect's bread and butter. The present onslaught was not initiated by the private developer in general but only

(Continued on page 10)

....FOR THE BUILDINGS TO BE CONSTRUCTED TOMORROW

Now is the time to make farsighted plans for the new buildings which will meet the post-war development of your community. Experience has proven that foundation investigations are a necessary part of all economical engineering planning because nearly all foundation difficulties can be traced to inadequate programs of sub-surface exploration.

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SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons, construction involving shore protection, ship building facilities, harbor and river improvements and borings for soil investigation.

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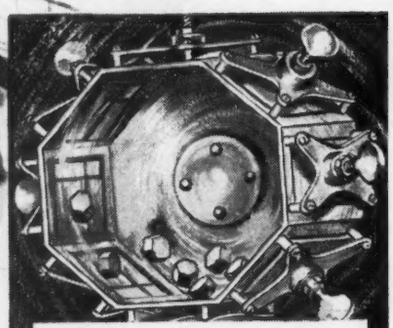

This sketch of the revolving drum, with one side removed, shows how five and one-half ounce slugs are slammed against samples of Monowall in intensive laboratory tests.

Sure, this is staged! No housewife would want to hurl iron slugs at Monowall—but Armstrong does, to prove it can take hard knocks.

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Made by the maker of TEMLOK INSULATION—Sheathing, Lath, De Luxe Interior Finish

Views

(Continued from page 8)

by that portion of the speculative building fraternity which may well be termed, "The Slum Builders of America."

Back of all the bickering and contention that has been aroused by this struggle in Washington, there emerges, in my opinion, a clear principle: THE GENERAL WELFARE IS NOT A BY-PRODUCT OF PRIVATE PROFIT. Like democracy, it is not something that is achieved by indirection or by acceptance of high-sounding phrases. It is rather something that must be studied, planned for, and worked on every day of our lives.

EUGENE H. KLABER, F.A.I.A.
Washington, D. C.

A "Master Plan" for Architects WITHOUT Political Implications?

Dear Editor:

The "Platform for Architects" is excellent, though a trifle political in implication. When you get your "planks" together, I hope you will build a *Master Plan* for Architects rather than a *platform*.

Although *Master Plan* as a phrase has been greatly abused, it is still a meaningful combination. Architects would do well to capture the magnetism and power behind the words and put them to work. With an inspired approach and a well developed destination in mind, a cooperative profession could create a masterful document.

A *Master Plan*, properly presented, should be universally welcome at this time in developing Architecture as an art, a science, a profession, a business, and an avocation, with tremendous civic, social, and economic possibilities.

Construction Leaders would recognize the Architects' Plan as a pattern for organizing the construction industry.

The Architects' *Master Plan* could be extended to be used as a textbook and reference in the fields of housing, private and public works, codes, zoning, utilization and contract of land, and the many and diversified problems of building a community.

It would provide new avenues of thought in employment, reconversion, rehabilitation, readjustment, replanning and rebuilding after the war. It would give the returning soldier a "goal" in the field of building.

EDWARD D. PIERRE, A.I.A.
Indianapolis, Indiana

(Continued on page 12)

FOR SAFETY'S SAKE . . . USE CONDUIT *(Full Weight Rigid Steel)*

Planned Flexibility

THE contractors on this building were foresighted. They planned an electrical conduit system that would provide maximum flexibility for all future wiring needs --and they installed Youngstown BUCKEYE CONDUIT, as this picture shows.

For maximum flexibility in YOUR new post-war wiring jobs, or in jobs replacing wartime emergency wiring, install full-weight rigid steel conduit in such a way as to anticipate all possible future needs and changes.

Youngstown's BUCKEYE CONDUIT, installed in any building, provides a permanent, safe and easy method of increasing or varying wiring circuits at any future time. In fact, BUCKEYE CONDUIT outlasts the buildings in which it is used and gives complete protection against short circuiting or arcing from vibration, dirt, dust, moisture, or corrosion. In exposed spots its rigid, full-weight steel walls protect against crushing or other mechanical damage.

BUCKEYE CONDUIT is preferred by electrical contractors in all parts of the country for its unvarying quality and strength. It will soon be available at all distributors again.

BUCKEYE TRADE MARK YOUNGSTOWN CONDUIT

Ask your distributor for: Youngstown Buckeye Conduit...Pipe and Tubular Products...Sheets...Plates...Electrolytic Tin Plate...Coke Tin Plate...Bars...Rods...Wire...Nails...Tie Plates and Spikes.

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YOUNGSTOWN, OHIO

Manufacturers of

CARBON - ALLOY AND YOLOY STEELS

Views

(Continued from page 10)

BUILDING PRODUCT FACTS

We want to thank all those good friends who have taken the time to write us about the new PENCIL POINTS *feature, Building Product Facts. We wish the letters could all be acknowledged separately but there are so many coming in that it is impossible. The suggestions and criticisms have been most helpful and we hope that all of you will continue to obey that impulse to write whenever you see anything you like or don't like about BPF. Address your letters to Don Graf, care of* PENCIL POINTS, *330 West 42nd Street, New York 18, N. Y.*

I look forward to each issue with interest. We will certainly save BPF. Of course, all postwar residential clients who have been talking to us are convinced that they are going to have plastic, glass or some wonderful material for a one-piece sink, drain boards, splash back—if not for a one-piece floor and wall. This material will be so hard it will wipe easily, so tough it won't scratch, and so resilient it won't break dishes. The BPF sheet on this product will probably have to wait for several years after the war. . .

BIRGE M. CLARK, A.I.A.
Birge M. and David B. Clark, Architects
Palo Alto, Calif.

I think it is a big help to have any and all information on building products, especially new developments. Many thanks for your efforts. . .

GEORGE RUDOLPH
Geo. Cooper Rudolph Associates
New York City

I think these BPF sheets are more valuable than the former Don Graf Data Sheets. . .

W. H. SCHUMACHER
Oklahoma City, Okla.

I am interested in the BPF sheets. . .

GEO. S. LONG
Akron, Ohio

I like this series and think it will be very helpful in my work. I would like to see a complete range of building materials covered in this series. . .

CARLTON P. CAMPBELL, Architect
Wyandotte, Mich.

Keep tilting with fatuity. . .

HAROLD HAMILTON GIBSON
Philadelphia, Pa.

Thank you for the reprints of BPF. The series is fine. . .

H. S. ORENSTEIN
Passaic, N. J.

I hope that the term "building products" will cover data on mechanical equipment as well. . .

GERALD J. VICKERS
New York City

I believe that I will find this new series of much benefit in my practice. You may be sure that it is my intention to save this series regularly. The descriptions are comprehensive. . .

EDWIN E. NEWCOMB, A.I.A.
Wolpert & Newcomb, Architects
Burlington, Kansas

Your BPF cards should prove useful. . .

W. H. OWENS
Cram & Ferguson, Architects
Boston, Mass.

You are on the right track. There is need for order and freedom from irrelevancies. When the seriousness and dignity of architecture and engineering is generally appreciated, irrelevancies may possibly decline. . .

L. A. DESJARDINS
Trinidad, Colorado

I think this series will be of considerable value in an architect's office. I only wish we had the complete series available now. . .

FRANKLIN O. ADAMS, F.A.I.A.
Tampa, Florida

(Continued on page 14)

Experience...

ANOTHER LEG TO STAND ON

Consider Sedgwick—for two reasons (there are others, of course).

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What does this mean to architects, engineers and builders? Simply this. Today's experience has taught Sedgwick much. Added to past experience, the results will take form in improvements in the design, construction and operation of postwar elevators and dumb waiters.

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Sedgwick welcomes inquiries regarding elevators, dumb waiters and special lifts for postwar installation.

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In these panelboards, *the switch and fuse are combined in one unit* — the current is OFF when the door is open, or the fuse carrier removed. This arrangement also renders replacement of fuses safe — quick — and easy.

Both the Ⓕ Klampswitchfuz and the Ⓕ Pulfuzswitch Panelboards are assembled from standardized units. In each, the switch blades make *pressure contact* with the fixed switch parts, assuring full current-carrying capacity. This, with the silver-plated contact parts, insures low resistance to current flow, and reduces heating.

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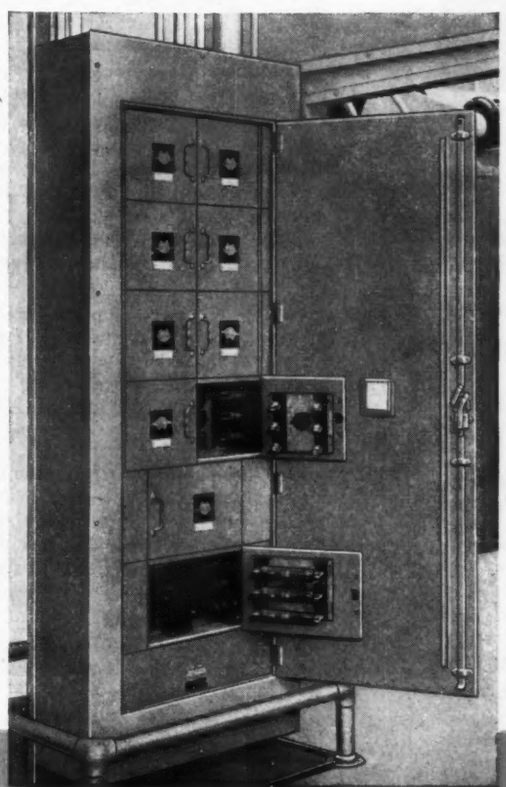
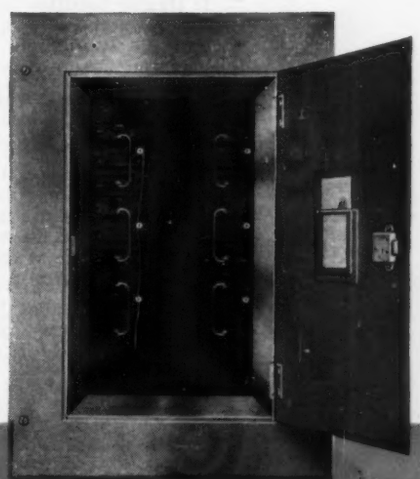
Below: A Klampswfuz Panelboard with 30, 60 and 100 Amp., 575 volt units. Ⓕ Klampswfuz capacities are 30 to 1200 Amp., 250 volt AC or DC, and 575 volt AC in 2, 3 or 4 pole types, single or double throw.



Ask the Ⓕ Sales-Engineer

how this equipment can be applied to your requirements. His long experience is at your service, without obligation. Write for the name of the one nearest you — or see listing in Sweet's, Electrical Buyers' Reference, or Thomas' Register . . . Frank Adam Electric Company, Box 357, St. Louis (3), Mo.



At right: A Pulfuzswitch type Panelboard with 60 Amp. branch circuits. Ⓕ Pulfuzswitch capacities are 30, 60 and 100 Amp., 250 volt; 30 and 60 Amp., 575 volt, 2 and 3 pole.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

Views

(Continued from page 12)

The new series is a very fine complement to an already outstanding architectural magazine. I only wish that you could have more than one BPF an issue. I intend to save every card in one of your 3-ring binders. . .

L. M. S. BEAL
Chestnut Hill, Mass.

Building Product Facts is a good idea. . .

DANIEL SANTORO, R.A.
Staten Island, N. Y.

Your letter gives me the opportunity to express my appreciation of the contribution you have made to the building industry. The BPF series, together with your Data Sheets, are invaluable. . . It is a relief to get factual information. I intend to file the BPF series and feel sure it will be a great help. . .

WALTER SCOTT ROBERTS, A.I.A.
Owensboro, Kentucky

Almost any subject you touch on will be of interest.

W. R. HOOVER
Washington, D. C.

We are of the opinion that BPF is going to be very valuable and we intend preserving the complete series. . .

HUGO F. KUEHNE, A.I.A.
Giesecke, Kuehne & Brooks,
Architects and Engineers
Austin, Texas

The BPF series looks good. It should save a lot of time. I intend to save this series and use it for reference. . .

ROBERT J. L. CADIEN, A.I.A.
Cliffside Park, N. J.

I want to congratulate you for bringing out the BPF. . .

PAUL BETZLER, Engineer
New York

Congratulations to PENCIL POINTS' newest feature Building Product Facts. I was particularly happy to see the costs given. I hope you will not omit this all-important feature from future numbers of BPF. . .

T. DE FELICE
De Felice & Slingerland, Architects
Bronxville, N. Y.

I think BPF is a good idea and I plan to keep them for reference. . .

EARLE WEBSTER, Architect
Los Angeles, Calif.

BPF should be of real value both for general information and in writing specifications. The presentation is clear and concise. I expect to file them. Of special interest to me is the attention focused on costs. I hope that this angle will continue to be stressed. . .

PAYSON REX WEBBER, Architect
Rutland, Vermont

I feel that you have something here that is going to be very helpful. I plan to file them. Please be assured that this service is much appreciated. . .

HARRY R. LENKER, A.I.A.
York, Pa.

If you cover all building products in the same manner, BPF will be of great value in the office for quick reference. . .

CARL E. SEGERBERG, Architect
Middletown, Conn.

I think they are splendid. . .

LOUIS J. SARVIS, A.I.A.
Battle Creek, Mich.

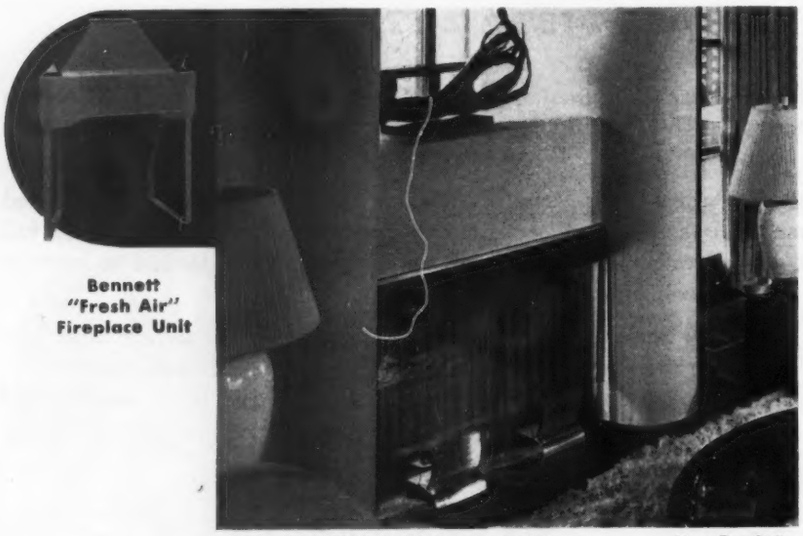
BPF suits my complexion okay. Thank you for past and future issues. . .

EDWARD C. KENT, Architect
Covina, Calif.

I appreciate receiving BPF and I think the information they contain is well worth keeping for reference. . .

NIELS P. LARSEN, Architect
Salt Lake City, Utah

(VIEWS *continued on page 16*)



Bennett "Fresh Air" Fireplace Unit

Residence Mr. & Mrs. George Preston Marshall — Photo Ezra Stoller

Avoid Vacuum — Smoke

When burning, a fireplace exhausts more than 200 cu. ft. of air per minute from the living quarters of a house. Especially in the tightly constructed "Home of Tomorrow," this creates a problem.

If tightly constructed, replacement air cannot enter around windows and door cracks from outdoors in sufficient quantities to supply the chimney draft. The result is a partial vacuum causing downdrafts and *smoke.*

If sufficient replacement air can enter, the average temperature of the entire house is lowered, cold drafts sweep the floor and automatic furnace controls are out of balance.

The Bennett Fresh Air Fireplace solves these problems completely. It draws replacement air from outdoors through heating chambers and distributes it into the living quarters warm instead of cold. Result: no smoke, no uneven temperatures, no interference with heat controls and a net *gain* in evenly distributed warmth.

Bennett Fireplace Units are described in Sweet's. Bennett Catalog sent free on request. We shall be able to produce when you can build.

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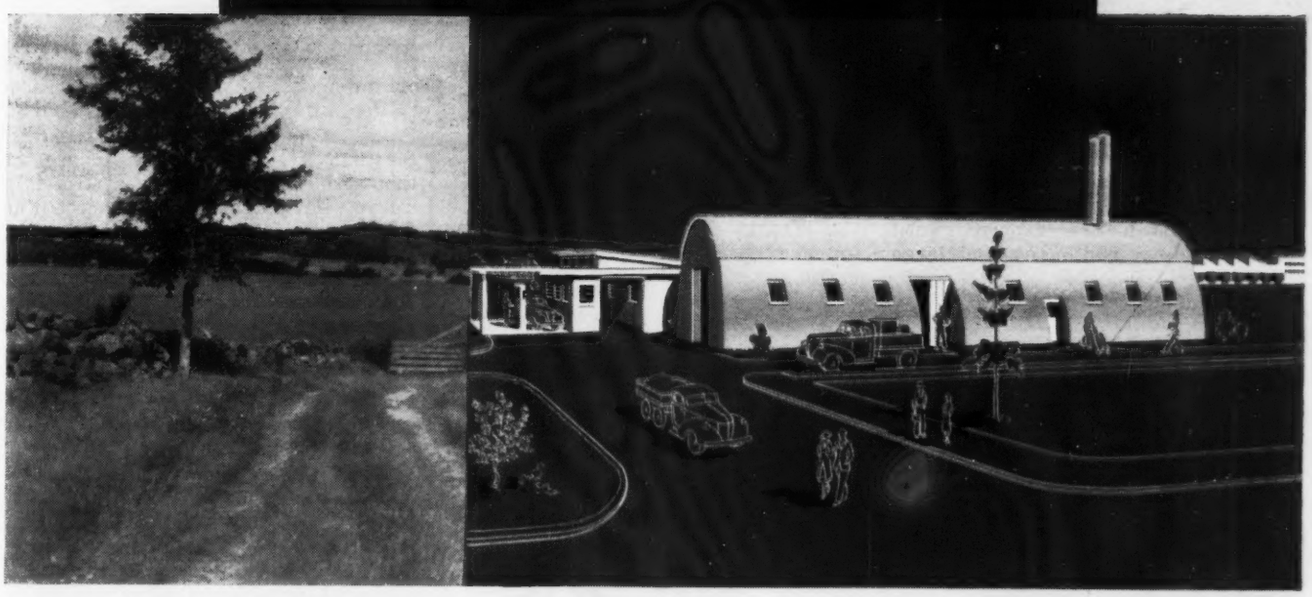
BENNETT *Guaranteed* FIREPLACES

INDUSTRY GOES RURAL



For one reason or another—availability of manpower, economy of supply, improvement of living conditions—the trend of industry is toward decentralized units in rural localities. Yesterday's "whistle-stops" will become thriving and prosperous communities through the construction of processing plants, sub-assembly factories and warehouses.

Stran-Steel is qualified to serve the architects and engineers who will translate this trend into actual buildings. The engineering know-how that gave the armed forces their ubiquitous "Quonset Hut" and other Stran-Steel utility buildings will be applied to the varied needs of industrial development . . . to homes, schools, stores and service establishments, as well as industrial buildings.

Through Stran-Steel experience and research, steel has become a versatile and efficient medium of construction: economical, easy to erect, fire-resistant, rigid, permanent.

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UNIT OF NATIONAL STEEL CORPORATION

Views

(Continued from page 14)

Utility vs. Inspiration

Dear Editor:

The recent numbers of PENCIL POINTS have been devoted almost exclusively to wooden shacks. The only building materials shown are exposed wood framing, siding, and many and large windows. These trivial buildings have utilitarian but no inspirational value. The absence of wall space would indicate that household possessions are as scanty and bare as the exteriors.

I ask if brick and stone are no longer used in building. Are form and proportion obsolete? If our architecture is reduced to these negligible and emotionally and culturally empty shacks, then there would seem to be no use for your magazine since one picture adequately tells the tale. Why scores of them?

WALTER DABNEY BLAIR, F.A.I.A.
New York City

CLOVER PARK SENIOR HIGH SCHOOL
TACOMA, WASH.

Selects

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ABOUT ANTONIN RAYMOND

Dear Editor:

I have read with interest your article regarding Mr. Raymond in the last two issues of PENCIL POINTS.

It seems to me that Mr. Raymond omitted one very important fact in his notes or statements to you, namely his association with Mr. Frank Lloyd Wright.

It so happens that I was in Japan at the time Mr. Wright was in charge of the work upon the Imperial Hotel in Tokyo. Mr. Raymond had come out to Japan with Mr. Wright and was a draftsman in Wright's office there when I met him.

Mr. Raymond certainly did not gain any of his present style or technique from the office of Cass Gilbert. From the similarity between Mr. Wright's work and Mr. Raymond's present work and his New Hope experiment, it would seem he gained a lot from Mr. Wright.

I do not wish to detract from Mr. Raymond's greatness, but in all fairness to Mr. Wright, the real Master Modernist, I feel all the facts should be known.

After the verification of the above statements, I think this letter should be published in an early issue of PENCIL POINTS. I am mailing a copy to Mr. Wright.

L. W. SLACK, Architect
Trenton, N. J.

EDITORS' NOTE: *The article on Antonin Raymond (June and July, 1944) was of course compressed in rewriting, and in the process reference to Mr. Raymond's work with Frank Lloyd Wright was eliminated. It seems that a matter of such common knowledge was less important than others which served to illuminate the subject himself, as he is today. There was no intention to disparage Mr. Wright, who would doubtless be the first to acknowledge the prerogatives of authorship. In this connection, the Editors wish to state that neither Mr. Raymond nor any other has solicited an appearance in our "Perspective" pages; and that the subject of a "Perspective" may or may not agree with statements about him, as the following letter indicates:*

Dear Editor:

Your colorful sketch of "Tony" has been ever so diligently studied by myself. One learns a lot of unsuspected things about oneself in a thing like that. I just loved the places where you pat me on the back. It is wonderful, too, to be told just how one feels about things, the causes for one's reactions, what one expects from the future, and why one did so and so. I thought I was quitting the joys of life in the country in an all-out war effort—not at all—in reality I was flying from the petty jealousies indulged in by rival camps in New Hope and New York. And, I hate the International Style and "revere" Neutra, all in one breath!

Thank you for telling about that New England gentleman. Didn't that make me feel swell! If I knew who he was I would send him some Scotch.

TONY

(Continued on page 18)

★ BETTER WIRING FOR BETTER LIVING ★

A switch in time saves...

TAKE a tip from Bill Bjones . . . he knows that a *switch in time* saves his family from avoidable accidents—saves many steps—saves electricity so vital to war production.

In the correctly planned home of the future, it will no longer be necessary to enter a dark room or hallway—grope for the light switch—or leave burning lights behind.

Multiple control by conveniently placed switches will permit home owners to "keep light ahead of them"—when and where they want it, at all times.

But multiple lighting control is just ONE of the many conveniences and economies that result from "*better wiring for better living!*"

The Westinghouse Better Homes Department was created to assist the building profession in the planning of postwar housing—and to supply authoritative information on all phases of proper application of electricity in 194X homes.

Specifically, our Better Homes Department housing specialists will be glad to give you free technical advice on:

Placing of lighting controls and outlets.

Selection and application of fixed electrical equipment in 194X homes.

Dimensions and clearances, for proper installation and access for servicing

Location and size of wiring, water supply, and drainage lines.

Refer your problems relating to the selection, installation, and use of home electric equipment to the Westinghouse Better Homes Department.

HAVE YOU RECEIVED YOUR COPY OF THIS FREE BOOK?

"Electrical Living in 194X" answers practically every question home owners may ask regarding the proper location of multiple control lighting switches—better wiring—modern circuit protection—electrical appliances and equipment in homes of the future.

This 64-page book is free! Get your copy by writing Better Homes Department (PP-94), Westinghouse Electric and Manufacturing Company, Pittsburgh 30, Pa.

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Views

(Continued from page 16)

A SOLDIER'S THOUGHTS ON CONTEMPORARY ARCHITECTURE

Dear Editor:

Only recently I have found time to look through the 1943 issues of NEW PENCIL POINTS which were excellent indeed. I was rather perturbed though to see the controversy about "Whither American Architecture." I gave up architecture to join the Army, after being active in the profession for fourteen years, and have been overseas for over two years. As a former student of the "Bauhaus," and as a designer, I have always tried to understand fully the basic problems of our time, and to express our time in my work. The results achieved may not have been perfect, but were sincere attempts towards functional planning, honest use of materials, and utmost simplicity. These are the basic concepts of our contemporary architecture as the new generation sees it.

This architectural philosophy happened to develop first in Central Europe, where it was brought about partly in revolt against the hypocritical architecture of the late nineties and the uncreative imitation of earlier forms, partly by necessity for more economical construction. Partly also it was the result of an urge to come back to straight fundamentals and be honest. This philosophy crystalized at the "Bauhaus," and being true and honest it was taken up by young architects and designers in many countries who realized how this school of thought would affect the whole concept and future of architecture. In following these principles, similar architectural forms were created simultaneously in many parts of the world. Indeed, we can speak here about an *international* architecture.

But this holds true not only for architecture. Modern life is much more uniform than it was two hundred years ago. Even so, there was an international architecture in the middle ages. We find Gothic Cathedrals of similar design in various parts of Europe. Beyond this, then and now, each country develops national characteristics because of materials used, climate, production methods, standard of living, and ethnological background. If today buildings in many countries are similar, it only shows that similar regional problems were solved similarly. Thus, we do not create an American architecture, or an Australian architecture, or an Eskimo architecture with intent to achieve a truly "national" end-effect, but simply strive to achieve a sensible solution, using our advanced technical knowledge to best advantage, wherever we are.

There is no need for opponents to break out into heated arguments with terms like "un-American," "Left Wing," and "other junk" in referring to contemporary design. Each former era expressed its time. During the Gothic period no Greek temples were imitated. This started only with the coming of the Renaissance.

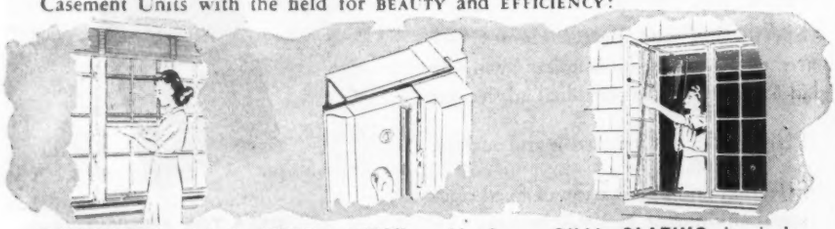
Let us hope that the international exchange is carried out further in the postwar world instead of being confined within national boundaries, and true good neighbor policy is established.

S/Sgt. ERNEST A. JACOBS (USASOS)

Lovely to look at

yes, and efficient too!

Post-War Window Areas will no doubt be larger. While generous fenestration offers exciting design possibilities . . . WINDOW EFFICIENCY must be examined more critically. Compare these design features of stock-size Pella Casement Units with the field for BEAUTY and EFFICIENCY:



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WOOD and STEEL combine beauty with strength in Pella frames. Wood is toxic and water-repellent treated. Steel is rust-proofed.

DUAL GLAZING is single panel type that mounts on inside of sash. Inconspicuous. Easily removed for cleaning.

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Pella **WINDOWS** CASEMENT ★ "AWNING" PROJECTED WOOD SASH

Made by Makers of Famous Pella ROLSCREENS and Pella VENETIAN BLINDS

BUSINESS BASIS FOR DESIGN AND CONSTRUCTION

This is the fourth of a series of eight articles by EDMUND HOWE POGGI *on the postwar status of the architectural profession. "If I Were an Architect," "General Contractor Vs. Architect," and "Whence Came the General Contractor," appeared in the May, July, and August* PENCIL POINTS.

Business is defined as "a gainful occupation."

A *profession* is defined by Royal Barry Wills, Architect, in his book, "This Business of Architecture," as "a gain-

(Continued on page 114)

Two hospital architectural competitions are offered by The Modern Hospital Publishing Company. The first is for best designs for a small general hospital, the second for a small community health center.

Both are open to any architect, architectural student, or draftsman except those regularly employed by the competitions' professional adviser or by the firms or organizations of the judges. In each class, awards are to be delivered in United States Treasury Bonds of the *current* values listed: first award, $1,000; second, $750; third, $500; three Honorable Mentions, each $100. In case of ties, duplicate prizes will be awarded. A selected group of designs in addition to the prize winners will be published.

Contestants *must register* with the architectural adviser (Carl A. Erikson, 104 South Michigan Ave., Chicago 3, Illinois) their intention of entering the competition by letter mailed on or before Sept. 30, 1944. Deadline for entries is Dec. 1.

The judges will be: Dr. Malcolm T. MacEachern, Associate Director, American College of Surgeons; Graham Davis, Hospital Consultant, Battle Creek Foundation; Dr. Vane M. Hoge, Chief, Hospital Facilities Section, U. S. Public Health Service; Mies van der Rohe, Professor of Architecture, Illinois Institute of Technology; Charles Butler, New York City architect; Nathaniel A. Owings, Chicago architect; Harry Shepley, Boston architect. The competitions are approved by The American Institute of Architects.

The American Hospital Association has recently completed a survey of the hospital field which forecasts postwar hospital expansion up to $1,193,133,985, exclusive of hospitals for war veterans.

Of the 1683 hospitals reporting, 53.3% indicate plans for some postwar building. Washington discussions are said to point to undertaking a strong drive for increased hospital facilities for veterans with postwar priority.

Delta Manufacturing Company of Milwaukee, makers of homecraft power tools, is sponsoring a contest for postwar shop planning.

Entrants must submit a floor plan sketch of proposed workshop, together with certain other information; the plan may show proposed changes in an existing shop; it need not be elaborate—may be a shop planned for only one or two power tools, or one with full equipment including drill dress, lathe, shaper, circular saw, band saw, scroll saw, sander, etc.

First prize: $1000 (retail value) in Delta tools; second to eighth prizes, Delta tools. Judges are to be: William Bachrach, Regional Coordinator of Engineering, Science, and Management, War Training; E. R. Haan, technical editor, *Popular Mechanics;* Harry Walton, home and workshop editor, *Popular Science.* Information about the contest (which closes October 31) may be obtained by writing The Delta Manufacturing Company, 620 East Vienna Ave., Milwaukee 1, Wisconsin.

A report of a survey conducted by the same company states home workshops as a hobby or business will have a place in more than 60% of all American homes after the war.

"Now that nearly everyone else has had their say, the men who will build them are going to tell you what the postwar homes will look like."

With this opening gun, the National Association of Home Builders of the U. S. announces a house design contest offered by the Chicago Metropolitan Home Builders Association. The contest is open only to active members of the National Association and is to stress the *occupations* of residents. "People of different occupations in this country might be more comfortable in homes designed to their ways of living, but, as far as we know, this has never been recognized in our architecture." So states the announcement.

Awards of $1000 in war bonds will be made for *designs* in each of the following classifications: the City Home; the Suburban Home; the Industrial Worker's Home; the Farm Home; the Summer Resort Home; the Veteran's Home or the Home for Two (figure this last one out for yourself—we're exhausted).

Judges announced: Raymond J. Ashton, president, American Institute of Architects; John A. Stelle, National Chairman of the American Legion G. I. Bill of Rights Committee; Abner H. Ferguson, FHA Commissioner; John Cummings Lindop, president, Chicago Metropolitan Home Builders Association.

The contest will close at midnight, October 20, 1944. Contestants must report on or before September 20 to the National Design Contest Committee, care Chicago Metropolitan Home Builders Association, 228 N. LaSalle St., Chicago, that they intend submitting a design or designs.

The Association states: "Architects will be given full credit and publicity in prize-winning and honorable-mention designs, and in 100 designs expected to be exhibited at the January Exposition. The only requirement here is that the architect submit his design through a builder who is an active member of the National Association of Home Builders."

1944 Edward Langley scholarships will be awarded, after all. The Board of Directors have concluded there may be some projects that could be carried out without interfering with war "effort" and have revoked their decision that no awards be made this year.

Since the time is so short, proposals should be submitted immediately to the Committee on Awards and Scholarships (Loring H. Provine, chairman), Architectural Building, University of Illinois, Urbana, Ill., in time for the committee's action prior to a special meeting of the Board's Executive Committee in Washington on September 22. Proposals must be made *in duplicate* on A.I.A. Form S70, which may be obtained from The American Institute of Architects, 1741 New York Ave., Washington 6, D. C.

News

Design and construction

Developments afield

Building Regulations

Related Professions

Products Progress

JOBS AND MEN

As peace approaches, in Europe at least, more and more architectural men will want to get back to jobs of their own choice. At the same time more architects will be actively seeking men for their drafting rooms. We recognize, and we are sure the architectural men concerned likewise comprehend, the necessity for continuing to prosecute the war vigorously. Nevertheless, terminations of war contracts are bound to affect all of us sooner or later.

To help make the reshuffling of manpower rapid and orderly, PENCIL POINTS is again setting apart space in each issue for listing employment opportunities for designers, draftsmen, specification writers, and other architectural workers, and for statements of the availability and qualifications of men to fill such positions. This section, under the heading *"Postwar Employment Service,"* will be run as classified advertising, three columns to a page.

In order to keep it within bounds, in the face of present paper shortages, a nominal charge of $3.00 an inch will be made. Each advertisement will be limited to one inch (approximately eight lines averaging five words to the line.) To insure appearance in any issue, clearly typed copy must reach the Employment Editor not later than the 10th of the month preceding date of issue. Each item will be given a PENCIL POINTS box number unless otherwise specified. All replies will be forwarded promptly to advertisers.

JOBS OPEN

The Housing Authority of the City of Milwaukee has an opening for Executive Director. Salary is $5500, with civil service and pension rights. Examination, closing October 30, will consist solely of appraisal of professional record and an oral interview. Apply immediately to City Service Commission, City Hall, Milwaukee, Wisconsin.

A large wholesaler of building materials and lumber items wants architecturally trained salesmen for exclusive territories. Reply Box 24, PENCIL POINTS.

News

We are indebted to Mr. H. Waechter for the following brief account of recent building activities in Sweden. Mr. Waechter is a European architect who has been in the United States for the past four years; he has written many articles on modern architecture and education, interior decoration, prefabricated houses, and other subjects.

In these days Sweden is perhaps the only country in the world which can boast of having a "peace time" building production. The invasion of Norway caused a considerable shock to Sweden's economic life and stopped short an unprecedented building boom during the late thirties. All forces were concentrated immediately on rearming this nation of six million people, and Sweden refrained from building activities during the years of 1940, 1941, and part of 1942. Even that field of activity known to us as war housing was missing.

Then, in 1942, conditions began to improve. Building activities were chiefly concentrated around Stockholm. Housing is more or less in the hands of the large co-operative societies and of the city of Stockholm. While the co-op organizations like "HSB" and "Riksbygge" (both close to labor unions) are particularly interested in apartment building, the city's architectural offices are concerned with low-cost individual houses. This type of small house dates from the first world war, when prefabrication methods were employed. Several hundred of these are reported to have been built during the last two years. The co-operative organizations have demonstrated once again their bold optimism, efficiency, and initiative. The non-profit motive always proved to be a tremendous stimulus.

In 1943 "Riksbygge" planned and erected 57 apartment blocks and has planned 40 more. The older co-op organization, "HSB," may claim to be, at present, the largest private producer of apartments in Europe, possibly in the world; it built about 40,000 new apartments in 1943 and hopes to build the same number in 1944. A single project houses about 1500 families. Apartments with one room or with three rooms are the most popular. The blocks are now —in most cases—laid out in rows of three-story houses of red or yellow face brick. The technique of construction in reinforced concrete, used in the late thirties, was abandoned. Between the rows of houses is ample space for children's playgrounds and for pine trees. "Sweden's building projects, however, are not restricted to housing. Following the example of two existing co-operative apartment hotels, a new project is advanced by a private builder—a hotel planned to house young couples (under the co-operative arrangement they are obliged to take 25 meals per month in the hotel). Included will be the customary services, such as restaurant, laundry, nursery, work room for the young people, etc.

There is also a new public library with space for about 100,000 running feet of shelving for Goteborg, Sweden's second city. Furthermore, the Swedish nitrate works—also a co-op enterprise—is planning an extension which will produce 80,000 tons of nitrate annually.

Sweden's ambition, of course, goes much further and the Scandinavian architects have convened to discuss postwar projects. Sweden hopes to contribute particularly to the reconstruction of northern Europe. Design offices of the cities and the co-operatives are also working hard on postwar improvements for Swedish cities. There is a growing interest in community centers, and the Swedes look with admiration at American accomplishments in this field as demonstrated by the work of the FSA, FHA, TVA, and some of the war agencies.

A new town of Lidice, to be built in Czechoslovakia after the war, is being designed at Columbia University. It will be a modern town near the old site which is to be used as a war memorial park. Adaptability to terrain and equal accessibility of all residential points to the center of the community activity will characterize the plan; it is also to provide an educational example of the most recent trends in American town planning to young Czech architects whose progress has been interrupted by 5 years of war. The rebuilding of Lidice is expected to employ hundreds of Czechs and will be financed by the Czechoslovakian government. The designing is under direction of Robert H. Podzemny (a native of Prague), architect and town planner, and was authorized by the Czechoslovakian Government in Exile.

A completely revised WPB Order L-335 imposes over-all control of lumber production and distribution at all levels. It became effective August 1, 1944, and supersedes WPB Orders M-361 (Southern Yellow Pine), M-364 (restricted hardwood), L-218 (Douglas Fir), L-290 (Western lumber), M-208 (assigning preference ratings for softwood lumber). The order prescribes *use* of ratings for obtaining lumber and will affect householders who want lumber for a shelf or a new porch floor, as well as large industrial consumers who may need it for shipping boxes. L-335 sets up procedures under which sawmills deliver lumber, distributors receive and deliver lumber, and all consumers receive lumber; it controls through quarterly authorizations the amount of lumber that may be received by large industrial consumers. Material covered by this new order: any sawed lumber of any species, size, or grade, rough, dressed, worked to pattern, etc.; except Dogwood, Persimmon, Rattan, Balsa, aircraft grade Sitka Spruce, shingles, lath, slabs, mine and rail ties, hardwood flooring, box shook, dimension stock, cut stock, millwork, used lumber, and whatever edgings, trim, and off-fall is less than 3" wide or less than 4' long (unless made into standard commercial lumber sizes or patterns).

An arresting note is the fact that under L-335 one sawmill may deliver lumber freely (without ratings) to another sawmill—it smacks faintly of the game of cards kids used to play, where you lavishly pass the cards you can't use to the next player who lavishly does likewise, until somebody wins. And of course anybody can *place* a certified, unrated order under L-335—but you'd better prop up that sagging porch roof *now* with an old piece of pipe (if you have any left), because it will sure-as-hell fall down before that order comes through.

The battle for improving New York City's obsolete zoning laws is on. Proposed changes have precipated a rush to get planned postwar construction "on the record" in order to take advantage of maximum allowances on land area and height under present zoning regulations. In one day, plans for 4 new skyscrapers, to cost approximately $20 million and designed for a total area of about 3 million square feet, were filed with the city's Department of Housing and Buildings. Plans were also filed for a 40-story office building with a 2-story penthouse to face the proposed 37-story fashion building on Broadway (see PENCIL POINTS, July, 1944); building cost is estimated at $3 million; the architect is Edgar J. Moeller.

Arthur C. Holden, president of the N. Y. Chapter A.I.A., approved a stiffening of the restrictions on height and bulk of buildings on the assumption that the amendment would create interim regulations which would protect the public interest until a careful investigation, wide discussion, and working out of more up-to-date principles could make possible a really scientific revision. He stated:

"Our primary need today is good block planning and better arrangements of groups of buildings." He described the proposed amendment as a "makeshift" which would raise questions, stimulate thinking, and enlist public assistance for the more detailed revisions to the whole structure of zoning which have long been needed.

The Real Estate Board of New York points out that one of the proposed requirements would have prevented erection of such structures as the Macy and Altman stores and Radio City Music Hall, that such a restriction would be detrimental unless made to apply only to residence buildings and non-residential buildings in residence or local retail districts.

The West of Central Park Association felt that the attempt to reduce population densities and building sizes would "in effect subsidize owners of improvements built under the existing provisions at the expense of the owners of

land previously unimproved," and suggested that some tax incentive be granted to a builder taking "less that the law allows" in the matter of building height and site coverage.

Chance to Help the Navy

The patients in the U. S. Naval Hospital at St. Albans, Long Island, New York, are extremely interested in small house construction and many of them are going to buy or build small homes after the war. They will welcome any pamphlets or booklets dealing with the subject. Manufacturers and other organizations having such material available are invited to send it to Lt. G. Alison Raymond, Educational Services Officer, at the hospital.

A code arrangement, outlining a complete and coordinated series of standard building requirements, has been drawn up by the Building Code Correlating Committee of the American Standards Association.

It covers approved standards as well as those in process of development. Among the chapter headings of the new Building Code Arrangements are: general building limitations; special occupancy requirements; construction requirements; fire extinguishing equipment.

Baltimore's postwar program, aggregating approximately $55 million, has been prepared, says Herbert Fallin, budget director.

It calls for water works, sewers, highways, airports, schools, and other public buildings, at a maximum expenditure of $15 million a year.

A "dispersed" type of fair for a proposed Los Angeles exposition is conceived by John Anson Ford, William Evans, Sumner Spaulding, and Reginald Johnson.

Various units would be built in suitable places and connected by freeways yet to be built, each unit so planned as to be part of the permanent plan of the area—the buildings and improvements of various kinds would then be designed for lasting benefits to the city and a definite part of the area's master plan.

In a report to the Haynes Foundation entitled "Community Development through an Exposition for Los Angeles," Samuel E. Lunden said the fair would be held in 1949 and 1950 to commemorate the centennials of the gold rush and the admission of the state to the Union, and would be a timely project to absorb the unemployed workers of the regions affected by war production cessation. "Roughly, with the Civic Center as the area of least investment but closest to traffic arteries and visitors' accommodation, the Fair would spread to Hollywood for its cultural center—to Playa del Rey developed for amusement—to Pomona for agricultural exhibits—to Long Beach for water transport—to the Airport—to Exposition Park—to a model community development, all connected by freeways or helicopters. With six years ahead, the necessary jobs of stimulating and capitalizing public opinion, of financing and planning, should be accomplished. And in these six years, through this plan the freeway plan would be accomplished, the Civic Center completed, the Airport built, a yacht harbor and beach playground developed, an opera house provided. All needed permanent facilities would be provided as an impressive by-product of a common objective of vital planning for what promises to be an exceedingly difficult period of transition."

Wichita, Kansas, plans four "in-town airparks," postwar, for private plane owners.

These airparks will be located: one in the downtown shopping district; one adjacent to mills and factories; two in residential areas. They are to supplement the present municipal airport. Also projected is a secondary municipal airport to serve as a field for student instruction, fixed base operators, and airplane dealers, repair and maintenance for non-commercial planes.

Design of Idlewild, giant airport for New York City, has been agreed upon by airlines which will use the field. The design is said to be a compromise between the tangential and the parallel runway systems. Work on the airport is expected to begin very soon and first operations from the new field are looked for by the end of 1945 or early 1946.

Six runways, designed for future expansion to twelve, if needed, are to be provided, with an operations and terminal building near the center of the system. Two 10,000-foot runways are said to be long enough to permit take-off space for any aircraft so far conceived. The present site occupies 4,057 acres on the northeasterly side of Jamaica Bay, Borough of Queens, 13 miles from the airlines' terminal at 42nd Street and Park Avenue.

Runways will lie in parallel pairs in three directions, permitting central location of the terminal building without putting the access roads in subways. Further development may be provided either by further paralleling of the first six runways or by rotating the whole design on the axis of the terminal building; this extension would result in the

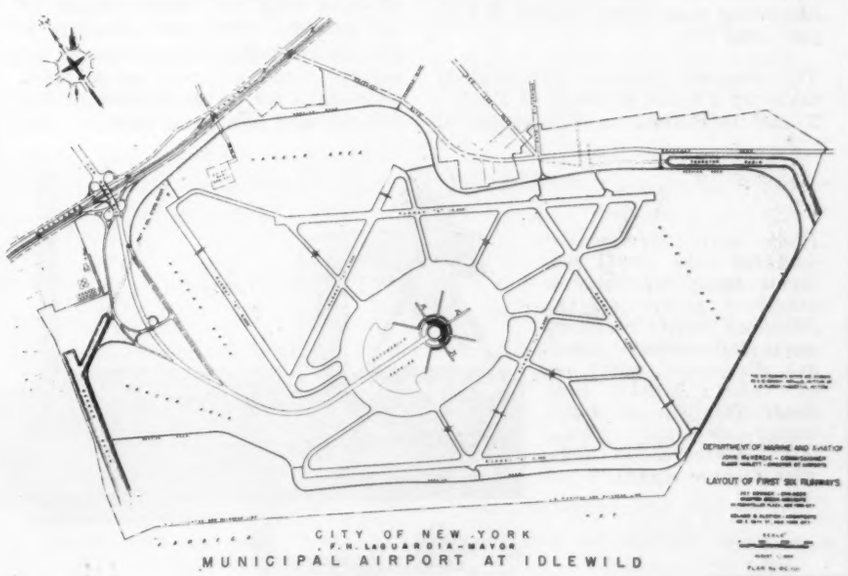
News

tangential system of runways and would necessitate, it is said, the placing of access roads beneath the level of those runways they would have to cross. One expressed objection to the tangential system is that it would involve possible simultaneous use of runways crossing each other at slight angles, making possible landing and take-off collisions, but the system's defenders claim the runway length is ample to prevent such possibilities.

The six runways have been approved: two for 10,000 feet; others for 8,200, 7,500, 6,500, and 6,000 feet; all will be paved to a width of 200 feet. Taxiways will be 100 feet wide. Work is to start immediately according to present plans. Ultimate cost of complete development of the six runways planned is estimated at about $47,969,000, including $6,329,000 for land, $30,100,000 for drainage, filling, paving, and utilities, $7,500,000 for the administration building, $2,730,000 for roads and bridges, $500,000 for a utility building, and $500,000 for a Civil Aeronautics Administration building. 20 large hangars around the periphery are also planned.

New war-developed electronic devices, such as radar, are to be incorporated. No immediate designs for a seaplane base are included because it is claimed that the rapid development of huge land planes capable of spanning the oceans has decreased interest in such bases, and that wartime-developed island seaplane bases will "presumably" be available after the war.

Authorities are somewhat disgruntled over an early inept news description of the over-all plan as a double "tomahawk" pattern, of which they disclaim all knowledge. Nevertheless, the plan *does* look something like a double tomahawk.



MUNICIPAL AIRPORT AT IDLEWILD

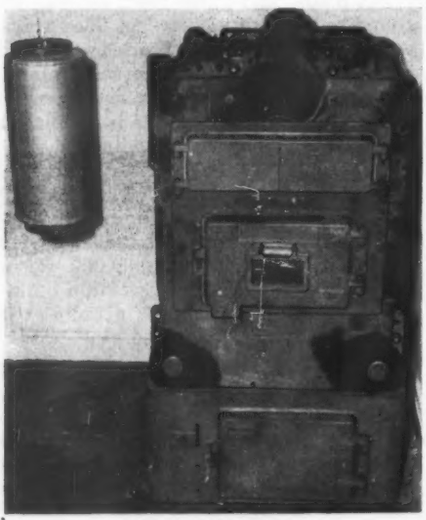
News

Products Progress

Fireproof Plastic Upholstery
United States Rubber Company, Rockefeller Center, N. Y. City, has developed a new fireproof plastic upholstery which is now a "must" on all warships, and is predicted to have usage later wherever furniture and decorations must be fire-resistant.

Profit Doors
Fir door makers are introducing factory-fit and machined closures as stock interior doors, announces the Fir Door Institute, Tacoma Building, Tacoma 2, Washington. While prefit doors are made now only to special order, the boring and mortising for locks, and gaining or routing for hinges may also be done before they are shipped. The "Sav-a-Space" sliding door unit is again available for national distribution; it has a new header with hardwood contact surface, and choice of two types of finish hardware as part of the unit.

New Floor Finish
A new finish for "streamline" flooring is announced by E. L. Bruce Company, Memphis, Tenn. It is claimed to have a deep penetration which seals the pores of the wood against dust and dirt, and to produce a lasting, lustrous finish that will not scratch, peel, or chip.



Efficient Anthracite Furnace

Anthracite Industries, Inc., Primos, Pa., have turned over to home-heating equipment manufacturers on a "no-strings-attached" basis for further refinement and retail production, their newly developed principle of burning anthracite coal at a maximum rate of approximately 50 to 60 pounds per square foot per hour, liberating more than 500,000 B.T.U. per cubic foot.

The complete furnace (illustrated) takes up a space as small as 2' x 2' x 3' and is claimed to be capable of heating a house in 15 minutes as compared to 45 minutes required by other furnaces. It is said the coal cannot clinker and that a fire can be maintained banked for days at a time during mild weather, with the use of very little anthracite, and brought up much faster in cold weather than is possible with former equipment.

The mechanism illustrated is a tube surrounded with a water jacket: a revolving worm introduces coal automatically into one end of the tube; the coal burns in the tube center, and ash is discharged at other end; draft is provided by air entering at ash end of tube and is drawn through incoming coal by induced draft fan in smoke pipe; no secondary air or secondary combustion space is necessary, because under proper conditions anthracite is said to burn to complete and perfect combustion within its own area; water is circulated around tube by water circulator and carries heat to the house through an outlet pipe.

The mechanism is said to be equally effective with hot water, steam, or air systems. The new principle is not yet available to the consumer but several manufacturers are at work on designs for its application in residential and industrial fields.

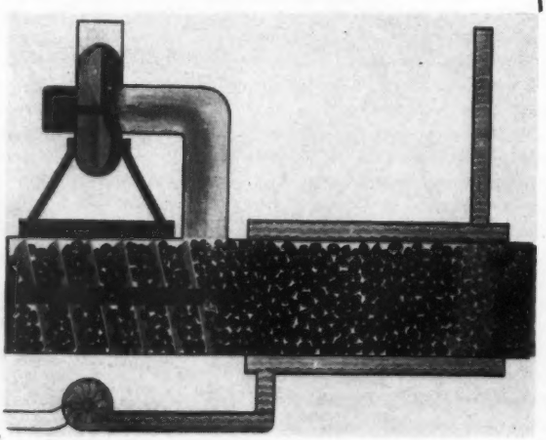
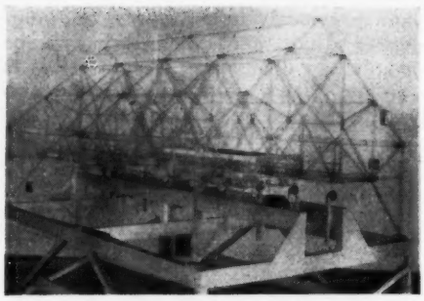


Photo above: new water-jacketed tube (left) performs same functions as standard heater (right). Photo at right: revolving worm (left center of tube); ash discharge (right end of tube); smoke pipe, draft fan (upper left); water circulator (lower left); heated water outlet pipe (upper right).



Transparent Construction Models
A logical application of plastics is the new development by Celanese Celluloid Corporation, 180 Madison Avenue, New York—transparent plastic models of large, intricate constructions. Through use of such models it has been found that foremen and superintendents grasp more fully their role in the total job and are better equipped to transmit instructions to workmen under them. Models are said to be light enough in weight for two men to carry. Photo shows "Lumarith" model of a towing tank structure, used to test hydrodynamic properties of seaplane hulls and floats; by observing the deflection resulting from specific loads suspended from the tracks, engineers are able to correct the calculations of deflections of the actual tow tank.

Smokeless Space Heater
Development of a smokeless coal-burning "bungalow furnace," incorporating combustion principles, is announced by the Bituminous Coal Institute, 60 E. 42nd Street, New York City 17. They claim that, in eliminating smoke and gases by actually burning them, about 50% more heat and 1/3 less residual ash are obtained from the same amount of coal. The new stove, 3 ft. high and 2 ft. square, is said to heat comfortably a four- or five-room dwelling unit, and has a coal capacity of 100 lbs., insuring ample heat for 50 or more hours without attention. The stoves will be available as soon as certain critical materials used in their manufacture are released.

Flow Control for Grease Interceptors
A new device, the "Flo-Trol", for interception, separation, and recovery of waste-water grease threatening interior drainage lines, is now to be built into grease interceptors made by J. A. Zurn Manufacturing Company, Erie, Pa. Said to be the first automatic overload feature of its kind ever built into a grease interceptor, it can be adjusted by the plumbing contractor making the installation to prevent excessive flow of waste-water above "Greaseptor's" capacity and should thereafter require no adjustment. Unique features claimed: no maintenance or replacement of parts; fitted gate for optimum flow rate; flush-cleaned by touching control handle, position of which is clear of trapped grease; a foolproof feature which prevents placement of "Greaseptor" cover without "Flo-Trol" being in operating position; internal expanding

(Continued on page 108)

More Planning Is Wanted—Not Less

Like the famous geyser, "Old Faithful," Mr. Robert Moses may be depended upon to erupt publicly at regular intervals, emitting quantities of high pressure steam and vapor and scalding any one who happens to be in his way at the time. New Yorkers are used to this—Mr. Moses has been around for a long time. He gets away with it because he does his real job—which is not planning, but the execution of plans developed by others—with exceptional energy and skill. Perhaps it is time, however, to question his right to further enjoyment of repute as a "Planner."

In the *New York Times Sunday Magazine* of June 25, 1944, Mr. Moses burst out with a wholly gratuitous attack on a group of what he calls "long-haired planners." The rather distinguished objects of his wrath included Eliel Saarinen, Walter Gropius, Frank Lloyd Wright, John Graham, Jr., Eric Mendelsohn, the Uthwatt Committee of the British Ministry of Works and Planning, Fortune Magazine, Lewis Mumford, and Rexford Guy Tugwell. From the written or spoken utterances of each of these, some choice paragraphs, carefully isolated from their context, were quoted. Our militantly short-haired hero bobbed in briefly between citations to deliver himself of a few words of leering comment, cunningly designed to distort true meanings and to arouse vague fears and prejudices in the conservative minds of habitual *Times* readers. Apparently the gentlemen and institutions honored by Mr. Moses' onslaught had upon different occasions opposed him or questioned his proposals. It seemed to him a good idea to lump them all together and dispose of them once and for all by damning them as foreigners, radicals, and impractical dreamers.

The technique of doing this is, of course, not one of Mr. Moses' personal inventions, but was imported to this country from Berlin via the Dies Committee of fragrant memory. Its use is hardly worthy of a man whose earlier career was associated with liberal principles. Can it be that he has, through years of self-identification with Baron Haussman, become like his prototype an autocrat ready to "ride roughshod over all opposition"?

The serious thing about this attack, which makes it of national rather than local importance, is that it is really directed not at the individuals named but at the whole idea of planning. By making it, Moses tacitly admits that he is not at heart a democratic planner—a fact that should have been evident from his record for a long time. Unfortunately, the public has grown to credit him with the planning of all the bridges, express highways, and other public works executed under his direction. The truth is that these were largely conceived, years before Moses came on the scene, by real planners in the Russell Sage Foundation and the Regional Plan Association. Others were worked up by able members of his staff.

Moses has consistently and inexplicably opposed the development of a comprehensive master plan for city and region as a preliminary to determining specific projects within it. The New York City Postwar Program reveals this failing. His performance in Portland, Oregon, showed his reluctance to tackle the all-over job promised in nation-wide press reports circulated before he went out there. His fight on Stuyvesant Town demonstrated his unwillingness to think of a city neighborhood as something that should be integrated with its surroundings as a part of a general scheme. His vaunted one-man suppression of the Tugwell plan for New York before the people had a chance to see and consider it does not jibe well with his declaration that "no great program of municipal construction can rest on any other basis than that of an informed majority public opinion, and that majority must be substantial."

Planning implies intelligent and purposeful change for the better. It must have broad as well as limited objectives. Sincere planners, who have the general welfare at heart, insist on looking beyond the immediately practical details to visualize the ultimate broad goals toward which the details should be directed. If Mr. Moses does not wish to be classed among the anti-planners intent on maintaining the status quo, he should refrain from deriding the views of the men of vision among us, without whom there would be little progress. If he would, instead, put his well-known capacities into the battle for more planning—not less—he could take his place in history as a truly great man rather than as merely an outstanding administrator.

KENNETH REID

Baldwin Hills Village

ASSOCIATED ARCHITECTS:
REGINALD D. JOHNSON, AND
WILSON, MERRILL, AND ALEXANDER

CONSULTING ARCHITECT:
CLARENCE S. STEIN

There is a series of landmarks in the replanning of American communities since the end of the First World War. The new movement began with the planning of Sunnyside Gardens in Long Island City (1924): a fresh experiment in large scale planning and housing, and by no means the least important, even now. Had the positive and negative lessons of Sunnyside been better digested, the crude economies and disordered layouts of so much government housing since 1932 would have been impossible.

The next large experiment was Radburn (1929). This was the first community plan to incorporate in its design the fundamental division of functions that the elder

Olmsted had first worked out, with masterly skill, in the design of Central Park — a division that Mr. Robert Moses's planners have, with his usual brashness, turned their backs on. Radburn's dull and conventional architecture kept it from being as esthetically stimulating as Ernst May's Römerstadt; but it represented a more radical approach to modern planning. In the use of the super-block, the blind residential street, the continuous internal park belt, the complete differentiation of footways from motorways, it was the first concrete demonstration of a fundamental new order, different from every historic type of city layout, and possible only through the use of modern technology.

The next landmark was Greenbelt (1935). Greenbelt was an advance upon Radburn in that the architecture and the community design were closer to being of one piece. In outline and execution Greenbelt was one of the high points of American planning: comparable to the great hydro-electric structures erected by the Tennessee Valley Authority. The very name Greenbelt was a happy word for the "horizontal wall" which Sir Ebenezer Howard had correctly regarded as essential to the integrity of the modern community. Whether this belt shall be spinal, as in Radburn, or peripheral, enclosing each neighborhood, and finally encircling the city, remains to be worked out experimentally. (The term "green belt" was first used, I believe, by Sir Raymond Unwin around 1920.)

Since Greenbelt many neighborhood communities have been planned and built: too many of them handicapped by the conditions laid down by Congress for slum replacement: conditions that in many cases provided that an old semi-slum should be replaced — as in New York's Ft. Greene development — by a new superslum. One of the handful of projects that stands out as a fundamental advance in both planning and architecture is Baldwin Hills Village in Los Angeles. Here every part of the design speaks the same robust vernacular: simple, direct, intelligible. I know no other recent community that lends itself so fully to strict scrutiny, simply because every aspect of its physical development has been thought through.

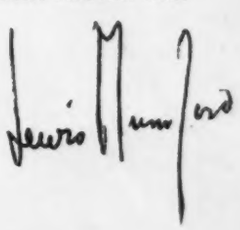
The site plan represents a further development of the Radburn idea, made possible by the use of the row house, with the removal of the garage to the service road. One of the most important facts about this plan is its clarity and readability; the buildings all form a comprehensible whole, which can be taken in at a glance; the stranger is not puzzled or led astray by any mere jugglery of the structures for the sake of achieving specious esthetic effects or pinchpenny economies. Such order is a vital attribute of a modern urban environment.

Unlike Radburn, unlike most English examples, Baldwin Hills Village uses the long row as the unit of building. That is perhaps one of the secrets of its economy, its spaciousness, its fine urbanity. The free-standing small house, or the short row of semi-detached houses, does not create either esthetic harmony or economy. When such units are standardized they look dull, and when the architect seeks to cover this dullness by trivial variations, the whole effect is fidgety. Worse still, the individual houses lack both usable land and visual privacy. In Baldwin Hills Village, on the contrary, there is a maximum provision of continuous green space, framed by long rows whose restful horizontal planes are differentiated only by their colored walls. Such a pattern could be universalized, with minor variations, just as the eighteenth century squares were universalized in the building of so much of early-nineteenth-century London. With all our talk of standardization, it is high time that we achieved such a standard and addressed ourselves firmly to living up to it in city planning.

The details of these Baldwin Hills Village houses are as well thought out as the general plan. The provision of little closed-in garden areas, for sunbathing and dining and idling, fully protected by a high fence against the cool afternoon winds that are characteristic of the West Coast, is a fine regional adaptation. Within, too, the rooms are spacious: they have been planned for active housekeeping, and would not become oppressively small and disordered through the presence of a few children. (Is it perhaps not an accident that few architectural photographs of modern "economic" housing show the occupants? Their rooms are already crowded before people enter them.)

Baldwin Hills Village is a challenge to a whole school of housers and planners who have ruthlessly pared down the first costs of building without bothering to note the depressing long-term results. The planners of this community have proceeded as if they themselves were going to live in it; and as a result, it will still be a livable community when a good part of our existing housing projects have succumbed, once more, to premature blight. These houses are, happily if a little ironically, the crown of Reginald Johnson's career as a designer of spacious private mansions; and in the plan itself, for which Clarence Stein was consultant, his experience with Sunnyside, Radburn, and Greenbelt came to its richest fruitage.

Here, then, is a standard for what modern community building may be. Better we may still have; but lower than this no large-scale development should fall.



Description and Appraisal...Baldwin Hills Village

by *Catherine Bauer*

Fundamental to the project, promoted as it was by a group of progressive architects, was the clear conception of "Thousand Gardens" (the Village's original name) as a demonstration of modern community design. This private rental development was designed to—and does—provide not only openness and privacy usually available solely to well-to-do home buyers; but also, many amenities and services possible only when both design and management of the entire community are unified. Balcony, walled patio, and landscaped central Green typify one extraordinary provision: that for outdoor living.

The loudest postwar controversies in the building field may rage around proposals for public action and subsidy for slum clearance, urban redevelopment, and low-rent housing. But how much progress can we expect from private builders?

Business, industry, and labor; officials, intellectuals, reformers of every color—all assume that housing and large-scale redevelopment must play a central role in postwar adjustment. Everyone assumes that public policy will be required to guide private action, public action necessary in one form or another to supplement and promote private action. But the kind and extent of public stimulation cannot be determined without first trying to answer such questions as: What proportion of the potential housing market will private builders reach? Can modern improvements in plan, form, or equipment stimulate basic changes in the standard of demand? (This factor alone could have great economic significance.) Or is everyone satisfied with the same old thing done the same old way?

These are big questions, not to be answered categorically; but they are so vital to the development of sound postwar housing and city planning policy that all progressive trends in the private housing field should be closely scrutinized.

Baldwin Hills Village in Los Angeles is probably the most seriously progressive experiment in home building by private enterprise since Radburn, New Jersey, was started eighteen years ago. Therefore it has national significance and is worth careful evaluation. Although wartime conditions have prevailed during its two years of operation, it is nevertheless possible to begin to answer from practical

experience some questions that had to be decided on purely theoretical grounds in the course of design. Is there really a market for spacious, modern rental housing and highly developed community facilities? For what sort of families? Does the bold plan really work; does it raise new problems?

The density is extremely low—about seven per gross acre—and interior space standards are unusually high; this is probably the most spacious urban rental housing ever built in the United States. Is this openness worth while? How should it affect standards for postwar building, particularly for re-using expensive central sites?

What about costs? If this is "optimum," even luxurious, large-scale housing, how much more does it cost than the minimum "decent, safe, and sanitary" standards of low-rent housing? Is the difference so little that some increase in minimum standards is warranted? What types of initiative—limited dividend, cooperative, insurance company, national building outfits (and with what form of public participation) are likely to be most effective in broadening the new market here opened up?

In this article I can only suggest answers to a fraction of such questions, tentatively and personally. It would be well worth while for a competent research staff to dig up some real answers—much more worth while, I think, than some recent efforts to reach statistical conclusions on whether housewives launder small articles before undressing, or vice versa.

History and Purpose

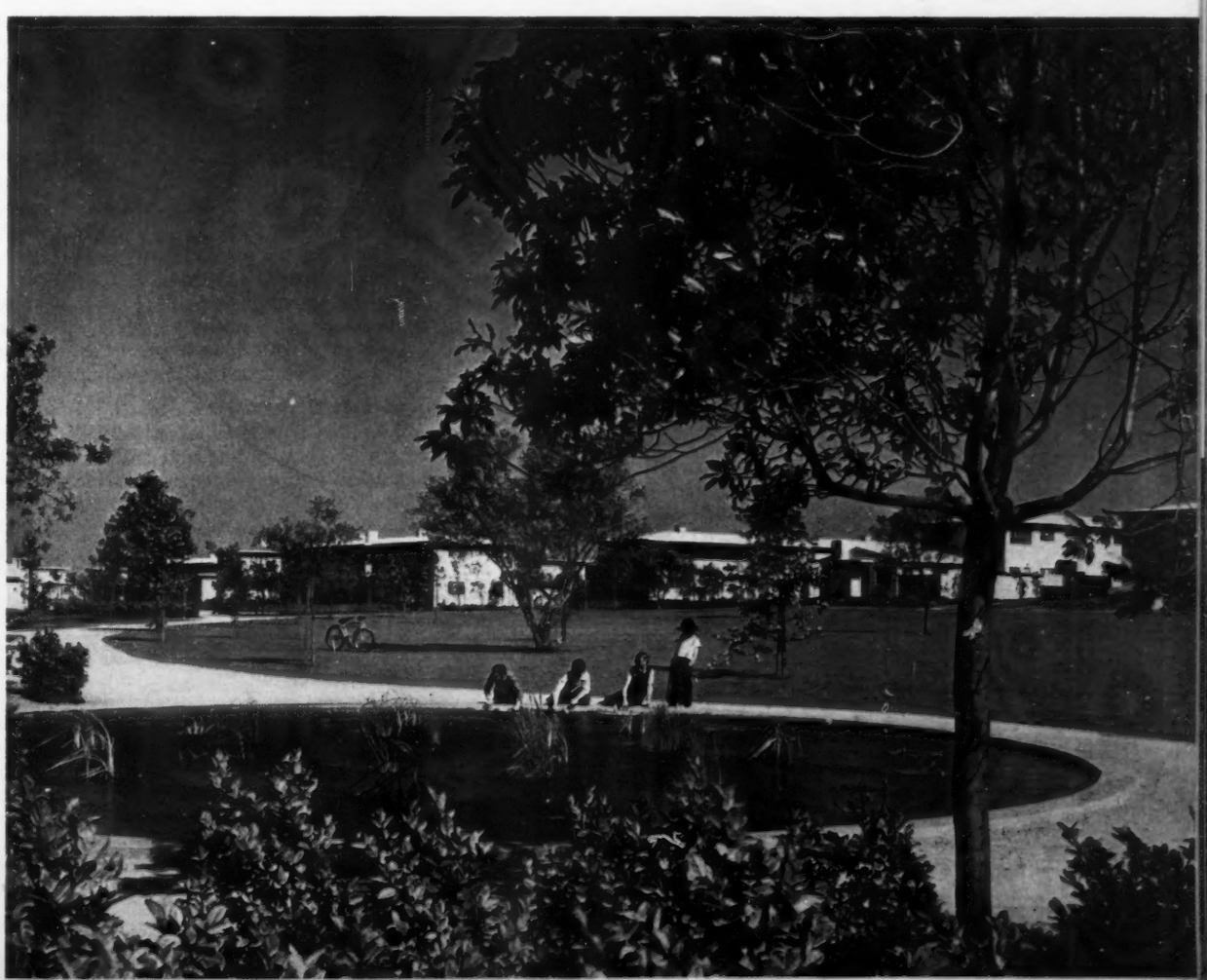
As early as 1934 a group of Los Angelenos had spotted this stretch of open farmland just inside the southwest city limits, sloping gently up under rough desert hills, as a likely site for a modern community. Reginald Johnson had for some time devoted his entire energies to housing and city planning. His associated firm, Lewis Eugene Wilson, Edwin E. Merrill, and Robert E. Alexander, had likewise considerable experience in housing. Clarence S. Stein, a prime mover of Radburn and many other eastern community experiments, was brought in as an active consultant.

The Rental Housing Divi[illegible] of FHA provided the only likely means of financin[illegible] a project (barring 100% equity investment as [illegible] Metropolitan Life Insurance Company). T[illegible]ing Act permits mortgage insurance u[illegible]lue on approved rental projects whi[illegible]r equity to 6%. Rent levels a[illegible]oved to be actively interested[illegible]

The big difficulty, [illegible] secure capital for the 80% [illegible]s ½% for the insurance). After [illegible] negotiations with banks and insu[illegible] was finally secured from the Nation[illegible]iation (RFC). It is a significant fact, indic[illegible] hand of financial tradition, that this sound, s[illegible]prise required public financing to start. There was [illegible] more public money in it than there is in most public hou[illegible]ng!

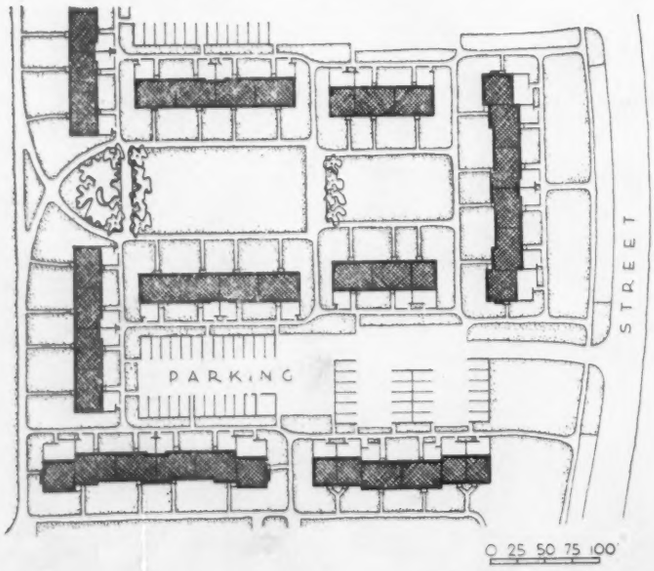
By 1941 arrangements were shipshape and construction started. Just as the first rentals were being made, came Pearl Harbor. Which means, of course, that the Village has never yet known "normal" operation. Gas rationing meant that a private bus line had to be put in between the project and the nearest main artery, half a mile away. New individual telephones lines were out, so an exchange had to be set up in the Administration Building. Rents, which average around $12 per room or $52 per unit, were frozen before operating costs were known. And the mass influx of war workers to Los Angeles caused a general housing shortage so severe that it is impossible to tell whether the long waiting list is due primarily to selective popularity or to necessity.

Baldwin Hills Village was never intended for low-income families. It is no substitute for public housing; and at present it doesn't even reach very far into the middle group, although principles and techniques used may have great significance for this vital building market.



Site Development

Above, in front of units, ground cover and flowers, rather than formal lawns, simplify maintenance problems, give privacy to ground floors. Below, portion of plot plan shown on facing page, with alternating service and garden courts. Garages and laundry drying space occupy service courts, which open to surrounding streets; garden courts are extensions of the central green.



Nor is it intended as a universal solution, even for the economic group it does serve. Many settled families want outright ownership of large private yards and individual houses . . . although even here it is likely that some of the Village's communal amenities and services may become popular and influence the whole process of city planning and subdivision. In the past, however, only two broad choices were open even to well-to-do families—the choice between a house-and-garden, normally purchased and taken care of by the occupant, and a rented apartment, usually without facilities for outdoor living and in a poor environment for children. Projects like the Village fill this gap.

Site and General Character

About 8 miles from Los Angeles' Civic Center by highway, 25 to 35 minutes by bus and trolley, Baldwin Hills Village is not ideally accessible in wartime. But the center of decentralized Los Angeles has little routine meaning for the average citizen, and the Port industries, Culver City, and Hollywood are considerably nearer at hand.

Breezy, cooler in summer than most of Los Angeles, sometimes foggy because the Pacific is not many miles beyond the wild, treeless hills to the south, the site is curiously San Franciscan in feeling. Viewed from the hills to the south, the pattern of the Village is as distinct, unified, and unlike the rest of Los Angeles as some Italian medieval town, or Robert Owen's sketch for the Ideal Community. Its long buildings are set in orderly fashion in a clear-cut green rectangle, 1000 by 3000 feet, no roads crossing it, highways around the edge, and beyond that, except for a school to the north and a sprinkle of speculative houses at the northeast corner, only open yellow fields and victory gardens on the lower hill slopes. This protective belt is

probably transitory, however, except for the hills, which may yet be saved since they do not invite subdivision. (These hills have double importance, incidentally, as their rugged incline persuaded the city to permit streets officially platted across this site to be closed.)

The community's real protection must come from its own character and form. Its spaciousness provides, perhaps, the one basic weapon against future blight. But low density alone can be cancelled out by bad planning. So the second, equally important, line of defense for Baldwin Hills Village is its pattern, inward turning toward 20 acres of quiet, permanent Village Green.

There are drawbacks: one wonders why no school was provided within the development. A temporary school is located across Rodeo Road, which will some day be a main highway. Eventually a permanent school will have to be built on a more advantageous site. On the other hand, there is an excellent high school nearby.

The block to the east is set aside as a commercial district for this whole section. I have no means to judge whether this is speculative romance or sensible civic planning: the site does adjoin a major artery, but is pretty rural now. However, Los Angeles will probably have at least one more wave of outlying development. Perhaps it is more urgently important to give sensible expression to this new building on the fringe than to haggle over areas already spoiled.

Experience seems already to suggest that perhaps community facilities cannot be as rigidly segregated as they were originally, with only social and administrative buildings inside the project. A nursery school, left out of the final building scheme, proved to be really needed, and two dwelling units had to be remodeled for the purpose. A general store, lunch-counter, beauty and barber shop perforce took additional units. Even after the big commercial center is available these interior neighborhood services will probably still be required.

Organization of Space

The primary planning axiom, already suggested, was spaciousness. The land was cheap, $2,300 per acre, the site flat enough for freedom. The architects wanted an open suburban character, orderly but informal, dominated more by green than by buildings. The result was the extremely low density, for these 627 family units, of 7.3 per gross acre. This amplitude of space had to be clearly articulated according to function: for community amenity, recreation, and interior communication; for auto access and services; and for private outdoor living. This meant discarding traditional concepts of streets, sidewalks, lots, or yards. It was decided that about one-third of the project should be planned for families without children, to the advantage of both childless families and those with children.

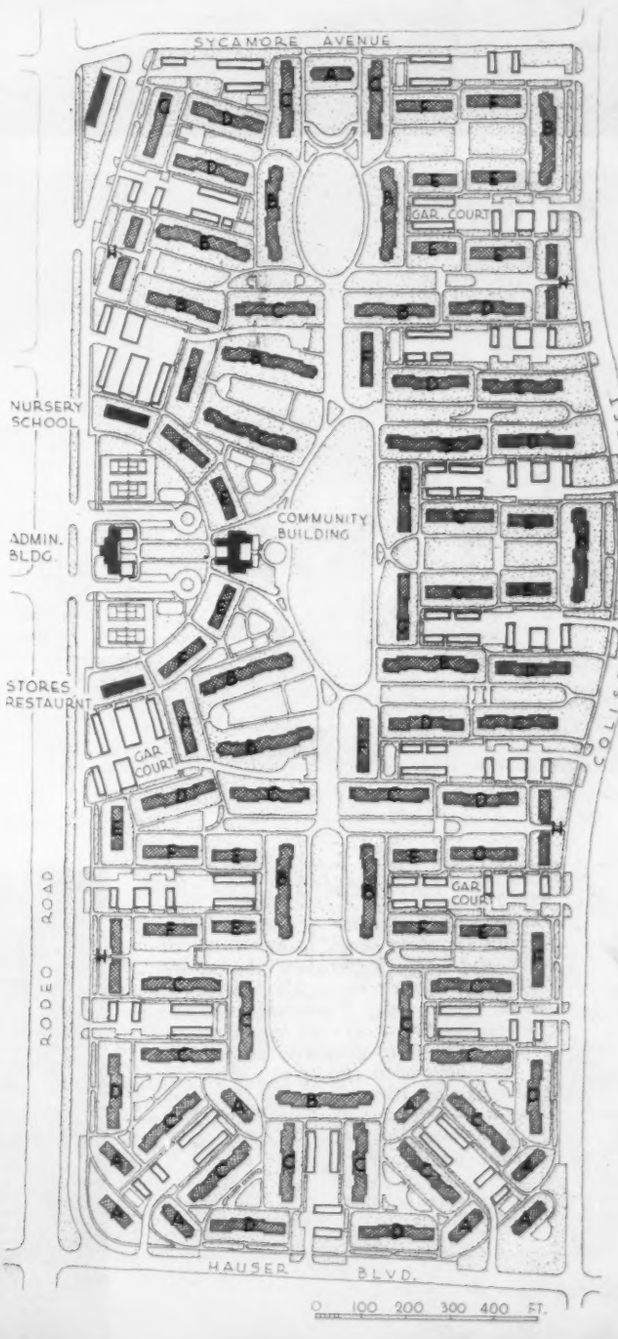
The entire area, about 80 acres, was considered one huge super-block, with residential and community buildings all turning in toward the open green core. In most suburban neighborhoods the skeleton is the street-system: indeed, the very word "subdivision" implies a cutting-up process. But in Baldwin Hills the entire scheme is determined by a flowing central park area: the Village Green, in three segments, radiating out on all sides into smaller garden courts surrounded by residential groups, with at least 100 feet between facades. Access roads, garages, and service courts form an entirely separate system, indented from the outside. In this project, for the first time in large-scale rental housing, another type of space was recognized as essential: *private* outdoor living areas, which are provided by patios, usually wall-enclosed, and to a lesser extent by balconies.

Community Space

The central park and garden court have varied purposes: large grass areas for general use; flower-plots, trees, and a pool for pleasure; playgrounds, tennis, and badminton courts for specific use; and finally, a 20- to 30-foot strip of ground-cover (usually ivy) along the fronts of all residential buildings, to insure privacy for ground-floor rooms and discourage children's play too close to open windows. Maybe the Green is too "pure"; there is nowhere to sit, for instance.

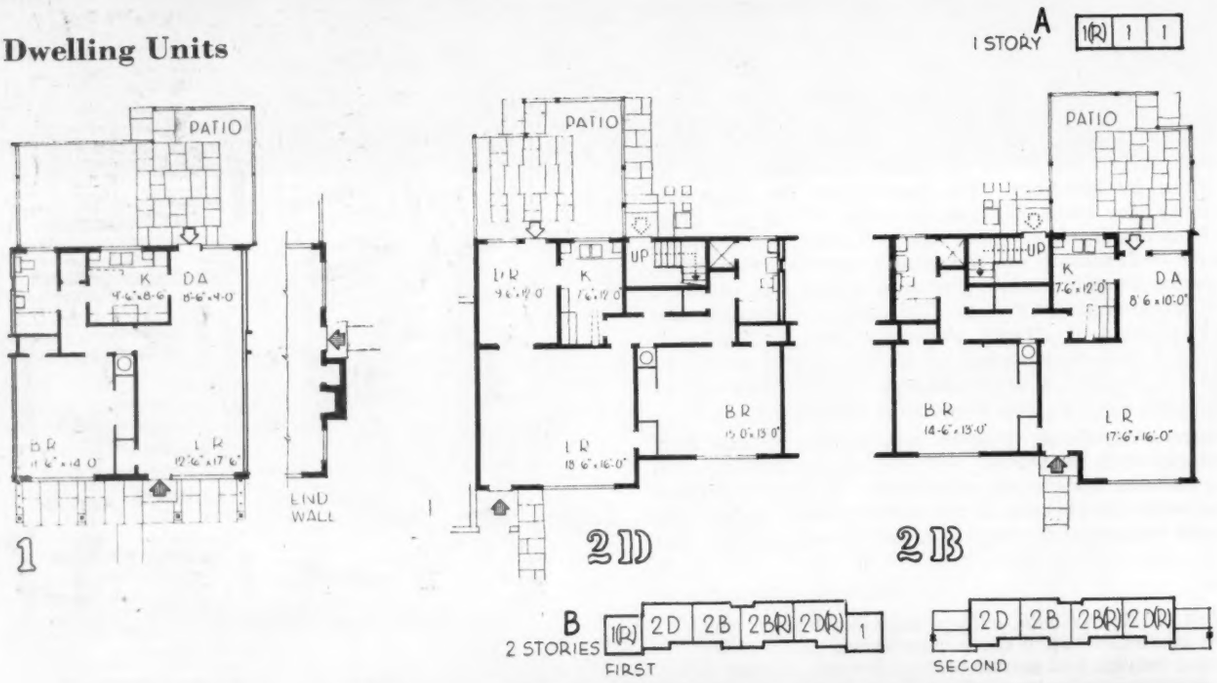
Service Space

Access roads come into seventeen paved garage courts, with individual car-shelters, each with a locked storage bin in the upper part of the rear wall, suitable for trunks and such. (This is the only rough storage provided; it seems satisfactory.)

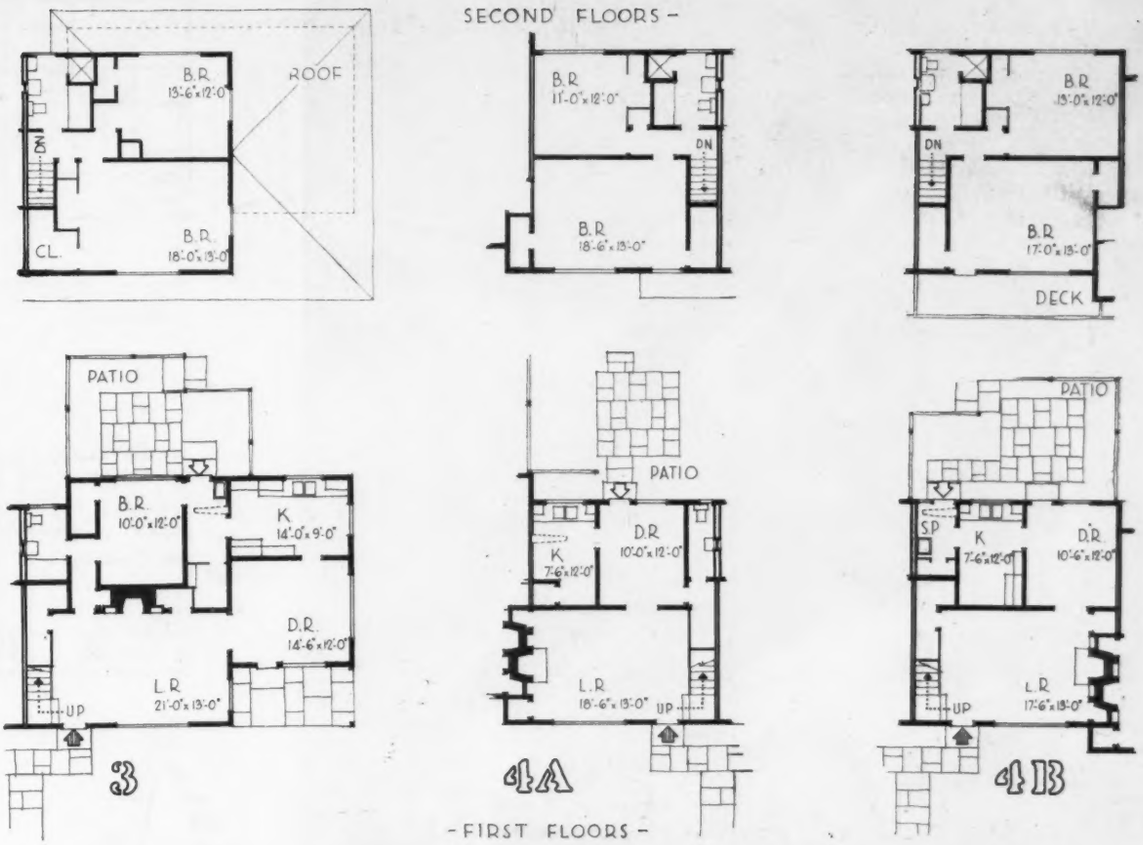


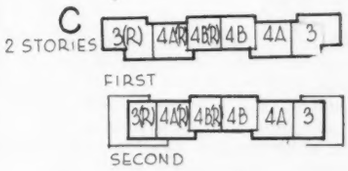
Plot plan (right) is bold, a huge superblock with three separate systems of open space: connecting parks and pathways; service and access courts; private outdoor living areas. Density is very low—about seven per gross acre.

Dwelling Units



Two-story buildings, 175 to 225 ft. long, predominate, with a few shorter one-story units, and some two-story in the middle stepping down to one-story at each end. (Such "broken" buildings, Catherine Bauer says, always seem rather awkward.) Facades fronting on the central Green are all two-story, all very plain—balconies and patios are in the rear—and the effect, with ivy-ground-cover already up to the lower window levels, is somehow English-at-its best; buildings vary in color: cream, salmon, light green.





Considering the buildings individually, one must admit that while they are contemporary in feeling, relatively simple and honest, they are nevertheless not exactly exciting as "modern" architecture. Connoisseurs of modern design won't find them esthetically interesting, whether or not the essential, bold modernity of the whole is appreciated. Yet this lack of sophistication may have certain values: it helps to emphasize the basic innovations in plan and pattern of living envisioned; and the fact that it does not startle the average citizen with superficial strangenesses may actually increase its worth as an educative force toward good large-scale planning.

Most garages are reasonably close to dwelling units; a few may be up to 150 to 200 feet away, 300 in extreme cases. Years ago, everybody said such a distance would never be accepted in America; yet at Baldwin Hills people recognize that the amenities they get in return for this minor inconvenience are more than worth the price.

One curious fact, demonstrated by two years of experience, is that a walled garage enclosure is more important than roof-shelter. Cars in cubby-holes apparently make fascinating play-dens for children: a bonfire was even built under one. Now the management is gradually closing them in.

Adjacent to all the garage courts are public laundries and drying yards. (Hooks are also put up in garages, for drying in wet weather.) Only the largest dwellings have utility rooms and laundry tubs of their own, and even they must use the public yards for outdoor drying, as this is

DWELLING UNITS, POPULATION, RENTALS

NUMBER OF UNITS		UNITS BY SIZE	
1-story	55	1-bedroom	275
2-story	216	2-bedroom	312
Flats*	356	3-bedroom	40
TOTAL	627	TOTAL	627

* Flats in 2-story units, each with ground-floor entrance.

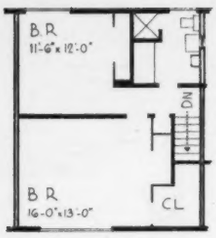
POPULATION

Total is approximately 2000, of whom 435 are less than 5 years old.

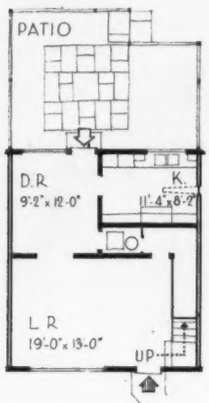
DINING FACILITIES PROVIDED		EXTRA SPACE	
Dining Rooms	356	Patios	450
Dining Alcoves	143	Balconies	126
Eat in Living Room	128	Utility rooms	80

RENTALS

Range is $45 (1 BR, B, LR, K, D; or 2 BR, B, LR, K, Patio) to $80 (3 BR, 2B, LR, K, D, Patio). Average rent: $12 per room, $52 per unit, including water, garage, garbage collection, excluding heat and light.



SECOND FLOOR

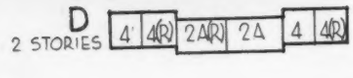


4 FIRST FLOOR

Dwelling Units (cont'd)

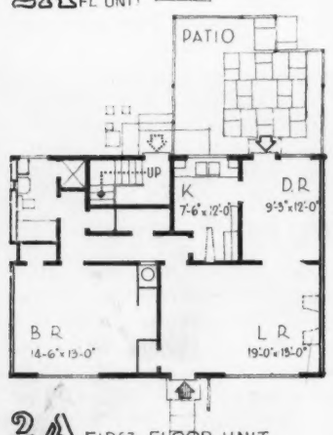
Interior spaciousness is relatively as great as exterior: Average area per dwelling unit is 1,080 sq. ft., average room count, 4.3 per unit. Permanent public projects in Los Angeles area average 750 to 850 sq. ft., with higher room ratios. Net living space per 2-bedroom unit in Baldwin Hills (excluding halls, stairs, closets) is 44% greater than in Dana, 67% than Channel Heights, 93% than Normont (all public projects).

D
2 STORIES

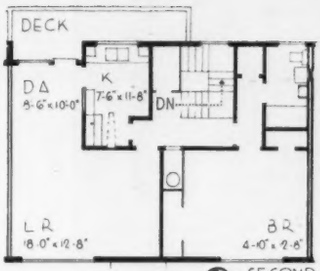


E
2 STORIES

2A SECOND FL. UNIT



2A FIRST FLOOR UNIT



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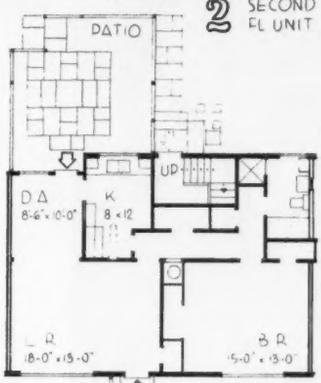
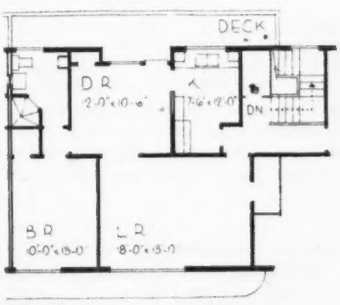


2 FIRST FLOOR UNIT



2C SECOND FLOOR UNIT

rigorously prohibited in patios (on the grounds, rather unconvincing to me, that second-floor living rooms should not have to look down on wash-lines). Laundries have nickel-in-the-slot wash machines and space for privately owned machines. Schedules are carefully worked out for use of both laundries and yards, the latter considerably larger in the non-adult sections. Apparently this is one unsolved problem—or perhaps the wartime volume of home laundry and shortage of help are aggravating factors, particularly at this income level. But almost everyone felt that the only ideal solution would be a utility room or porch, and drying yard, for each home, though that would add considerably to costs. It was originally expected that most laundry would be done commercially, and perhaps, after the war, this will be the case.

Private Outdoor Space

Of the 627 dwellings in the Village, 450 have private patios, most of them enclosed by 6-foot walls, the rest by hedges. It is now agreed that practically all should have walls, and that almost all dwellings should be supplied with them. This whole principle seems to me one of the things we should try to get accepted as a *minimum* standard.

In plan the patio is simply an old-fashioned, enlarged back porch, opening off the dining space near the kitchen. Its outside door is really the service entrance, and opens on a narrow path walled or hedged off from the garage court. In area the patios range from 250 to 400 square feet. When I first saw them, under construction, I felt they might be rather cramped, particularly as they are in part service yards as well as outdoor living rooms, and include meters and sunken garbage-pails. But on seeing them again after two years of use I changed my mind. They seem to offer adequate if not luxurious leeway for outdoor eating, sunbathing, infants' play, and varied, if small-scale, gardening . . . though obviously not all at once. The patio would

F 2 STORIES

G 2 STORIES

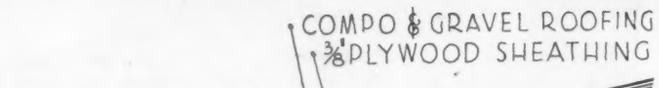
H 2 STORIES FIRST SECOND

Typical Room Areas, Baldwin Hills Village:

Living Room	*...255 sq. ft.*	*Kitchen*	*..... 98 sq. ft.*
1st Bedroom	*...208 sq. ft.*	*Dining Area*	*...120 sq. ft.*
2nd Bedroom	*..132 sq. ft.*	*Bath*	*....68 and 48 sq. ft.*

This is really optimum *standard space: a living room in a $60 unit takes a grand piano easily.*

One successful garden court treatment is the use of wide gravel areas spotted with trees. Perhaps this might have been more widely adopted; the Tuileries has always seemed an ideal urban park, more useful than a lawn for strolling with the baby carriage and for children's play. Long unit above occurs only at four exterior walk entrances, emphasizes the feeling of entering a protected retreat. Like other buildings it is long and low, with 2½-ft. overhang at eaves.



TYPICAL CORNICE DETAIL 0 3 6 9 IN

Children's Play Space

Several enclosed play yards are scattered through the community. In these, mothers of families are getting organized to spell each other for group supervision. Apparently this kind of cooperation doesn't come very easily, perhaps particularly in this upper-middle economic and social group.

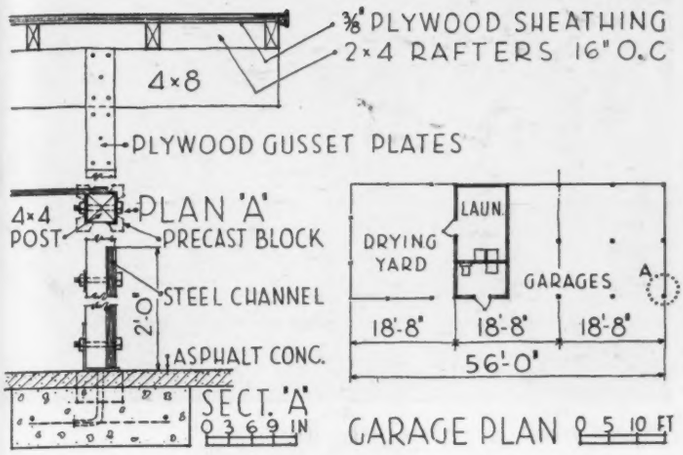
have been more serviceable as an extension of indoor living area had floor-to-ceiling windows been used at this point.

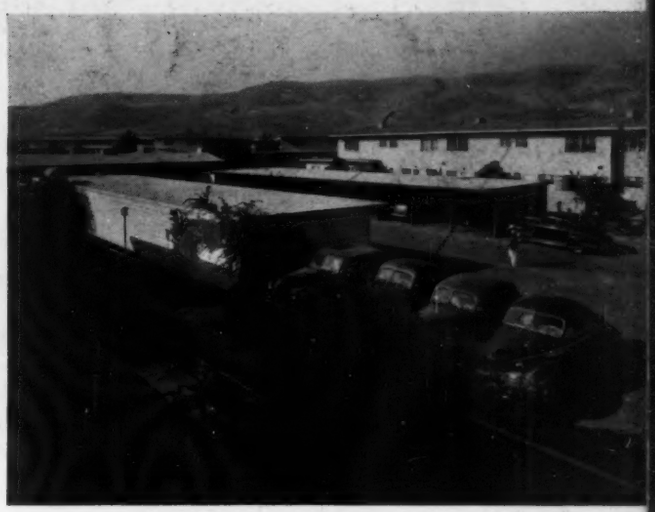
Refuse is collected by the management from every patio or rear entrance twice a week, and brought to a central station for city collection—a rather expensive process. Incinerators were originally considered, and opinion is divided as to whether they would be better than the present system.

Balconies afford outdoor living space to most of the upstairs flats. 126 units have balconies, some 40 of them patios as well, and some have 2 balconies. They are large enough for eating and sitting but, although they are greatly in demand, seem to a casual eye seldom used except for baby carriages or play pens. We have never in America taken to balcony life as they have in Europe; whatever the reason, it is generally agreed that a balcony is no substitute for a patio.

Perhaps a word should be said about the "front" and "back" situation. Here much the same problem exists as in Radburn and many public projects. The front door, theoret-

Garages





ically, opens from the living room into the public gardens and Green. Yet this is rarely used; anyone arriving by car will naturally come in from the garage court, entering usually by the patio and dining space. Perhaps this is quite okay, but I am not entirely satisfied that dwelling plans yet quite recognize that the "service" door *is*, in actuality, THE main entrance.

One theory, which has had considerable currency among the planning intelligentsia, I am glad to see blasted anew: namely, that in the interest of scientific orientation all dwellings must face the same way in a modern plan, thus disposing of any difference between one side of a row and the other. The invidious distinction between Queen Anne fronts and Mary Ann backs was thus to be liquidated. Actually, there never was a time when the functional difference between recreation space and service space was more necessary than it is today. If necessary, differentiation in use and treatment of courts would have to take precedence over orientation. Variation of floor plans from one side of a court to another will usually take care of problems in room orientation.

Building Masses: Construction and Architecture

Construction is of standard Southern California frame and plaster, except that 9% of the apartments have reinforced brick exterior walls. All buildings rest on two slabs of concrete with membrane waterproofing between. Second floors, when different apartment units are on top of each other, are of floating construction for noise isolation. A few minor cracks have developed on the outside, probably less than would normally be expected, and none whatever on the interior. Windows are steel casements with two or three horizontal panes and are simple and quite large if not particularly dramatic. Permanent screens and venetian blinds are included. Heat is furnished by gas-fired, forced-warm-air, unit heaters. Many units have wood-burning fireplaces. Ground story floors are oak finish.

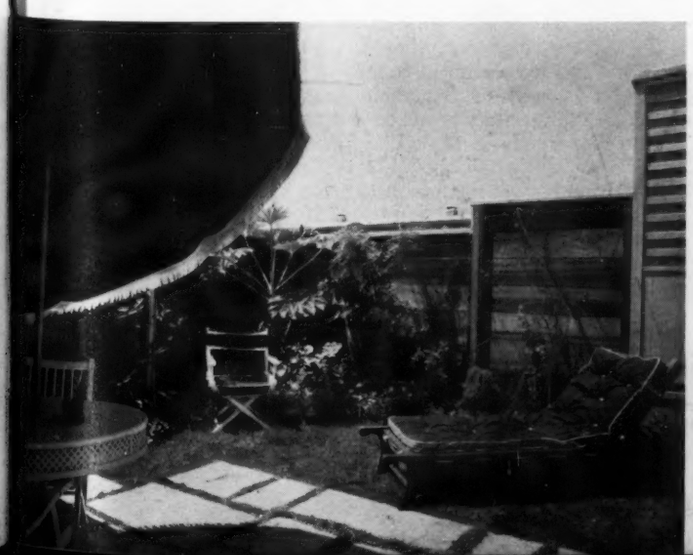
Colors are pastel, and to this eye seem a little too pale to have much effect on the pattern of the ensemble, although this may be due partly to post-Pearl-Harbor paint. One also misses the bright flower-masses originally planned, but omitted for lack of maintenance.

The community group—2-story green administration building and apricot club-house with a broad terrace—is on a strong central axis which bisects the Green. They are set in bright formal gardens, crisp with massed geraniums, low hedges, rows of olive trees, grassed squares, and gravel paths. A pool, waterless until someone figures out a way to keep babies out of it, lies toward the Green.

The emphasis on the central axis seems to me curiously out of key. Not merely unfashionable, it implies a monumentality completely belied by the entire spirit of the undertaking. Prime factors for unity and harmony are the long, low buildings and the standard roof design, with its 2½ to 12 pitch curving down into a flat 2'-6" overhang, very light and almost Oriental. The "architecture," if it isn't striking or exciting, is nevertheless sound, pleasant modern vernacular, much better than if it had been pretentious and failed.

One fact-of-life about large-scale housing design has further proof in Baldwin Village, as its architects are happy to acknowledge. Minor variations for variety's sake are quite meaningless in anything so large. Special refinements in plan can usually only be appreciated on paper or from an airplane: on the ground they are either invisible or tend merely to cause slight confusion. Subtle variations in building design or landscaping are often even less effec-

Private Outdoor Area



Typical living room

Dining area

tive. Only bold contrasts really count. Real variety and visual interest is perhaps most likely to come from big simple rhythms: the *dick-dick* and *dock-dock-dock* of repeated standard dwelling forms punctuated by the *Bong!* of buildings designed for special purposes. A well designed nursery school, or a new building for neighborhood services, or a swimming pool, would greatly enrich the Village.

As for preferences in dining space—i.e., whether it should be a separate room, an alcove off the living room, or merely extra space in kitchen or living room—there are as usual no clear-cut conclusions. In 80% of the units there is either dining room or dining alcove making an ell with the living room . . . with few vestigial inches of partition framing the opening. There is no eating space in kitchens except in a few of the largest units. In 128 smaller units, dining is in the living room.

This seems satisfactory and the architects feel they hit it about right. However, the able manager, Mrs Jennings, thinks that many families would like kitchen dining space, and that some would give up a separate dining room to get it, *if* they had a living room large enough for fancy dinners. Probably the typical Baldwin Village arrangement is the best general solution. But I do believe that ideally efficient kitchens should include some extra space, for eating, comfortable sitting, a play-pen, or just elbow-room.

One change the architects would make if they were doing it over would be to have more 1-story structures, and fewer flats one over the other. People like to be at ground level, more could have patios, and they would be more private. Also, with all the insulation between floors, noise still gets through. The greater ground coverage from more 1-story structures could easily have been absorbed at this low density.

The error (or what seems an error at this time) for which FHA was primarily to blame was too many 1-bedroom units (40%). A prime purpose behind the enterprise was to provide good rental housing for families with children, yet FHA's conviction that rental units are usually temporary lighting places for small adult families was too strong. Actually, whether or not wartime experience is a fair indication, the 1-bedroom units are least in demand and many families apparently seek permanent residences.

Village Facilities: Pros and Cons on "Community Living"

The central office, in addition to receiving packages, telephone messages and such, provides one unique service: even in wartime, it maintains a pool of maids, who are paid on a monthly basis by the management and may be employed by tenants for 60¢ an hour. This seems to me, in its opportunity for professionalizing domestic service, to offer the rudiments of the only sensible future answer to the "servant problem."

On the social side the children's angle may be considered first. A temporary elementary school with complete athletic and playground facilities lies across Rodeo Road, and the excellent high school is within easy walking distance. Inside the Village, the nursery school, which occupies two remodeled dwelling units, takes care of about 30 children at a time. A large enclosed playground a few yards away has sand-boxes, a large shelter, swings, etc.

Administration of the nursery school has gone through three stages. At first it was run by the management, on a concession basis; later it was taken over directly by a tenants' organization, the Children's Center Association, and it was finally decided to arrange to put the school under the Lanham Act, which reduces the cost for full daily care and makes it available to all working mothers, whether in a war-industry or not, regardless of income. On this basis the school's enrollment could be trebled overnight, but part-time care cannot be provided. If Lanham Act developments are a sign that sooner or later nursery schools will be part of the public school system, or receive public assistance, the problem of integrating their sites into neighborhood patterns will be more important than ever.

There seems to be a general conviction that the Village works perfectly for infants. For children from the age of about 4 to 8 or 10, however, there is some feeling that an old-fashioned back yard still has advantages over the limitless Green. To offset part of the difficulty, a tenant group is sponsoring the employment of a professional recreational director for the summer to supervise the school playground across the road.

Every tenant is automatically a member of the "Villagers," an organization without dues, which initiates much of the social activity and publishes a neighborhood news sheet. Entirely independent of the management, the Villagers have stuck to social matters. There is, however, a "Committee of Three" which handles "little gripes" with the management. Presumably if a major issue arose the existence of a responsible well-established tenants' organization would help.

Not many, I think, object seriously to the rules and regulations, which are as a matter of fact very few. Initial policy regarding pets was to charge $2 a month for a dog, $1 for a cat. Now, however, they are trying to eliminate dogs entirely and keep cats at home. For what they are worth, I have my lonely doubts about such regulations as the following: "Tenants are asked not to air or sun their babies at the front door of their apartments . . .in order to maintain the character of the Village. . . . Tenants are reminded that laundry must not be hung from balconies or in patios." Another, much larger, question, in which I am probably even more alone, is this matter of "careful selection" of tenants. I have a strong chemical reaction against everything this phrase implies: racial discrimination, and the conscious effort to create a one-class community of nice, conforming, socially acceptable people.

On the other hand, one must be realistic if one believes in gradual progress. I might not choose to live in *any* select middle-class neighborhood, planned or unplanned, but a great many of the very people discriminating enough to

Bedroom

Kitchen

appreciate the physical advantages of Baldwin Hills Village will also demand neighbors as much like themselves as possible, rightly or wrongly. If they were organizing a cooperative to produce their own housing, they should certainly have the privilege of getting together a congenial group. So why can't that principle be extended to the selective process in a development like the Village? Perhaps this is all a Bohemian hangover, a matter of my own personal taste.

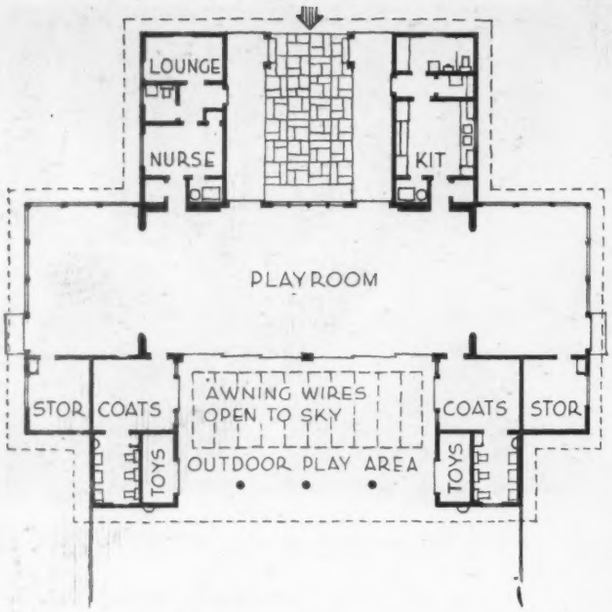
And yet, discrimination and class-segregation are somehow more positively crystallized when they are practiced in such an efficient, official, wholesale way than when they develop accidentally and imperfectly. To proceed from the latter to the former is hardly gradual progress: it's moving backward. I don't know the answer—and it's almost as difficult in public housing. But perhaps one can hope for a group of hardy cosmopolitan souls with positive ideas about democracy in each and every community development, to persuade the rest gradually that the most interesting, stimulating, mutually enriching communities are made up of *different* kinds of people . . . and that anyway, people aren't nearly as different as they are sometimes made out to be.

Optimum versus Minimum: the Cost Differential between "Good" and "Decent" Housing

If Baldwin Hills Village is in many ways the most attractive, livable rental community in the country, how much does this extra degree of amenity cost? Some of it comes from good modern planning techniques, of course, and costs nothing but sense and sensibility on the part of the planner and entrepreneur. And cheap land facilitated great openness. But a lot of the attractiveness of the Village derives from standards of space, facilities, and equipment meas-

Interiors

Below, living room. Storage space is better than in many tailor-made expensive homes. Some apartments have 7 closets, most have 5, with 25 to 30 ft. of pole. Each master bedroom has a whole wall of closets faced with painted vertical boards. The kitchens, large, ordinarily have no eating space, but are equipped with stainless steel drainboards, large divided sinks, ample cupboard space. Most of the tiled baths have stall showers.



FLOOR PLAN 0 10 20 FT

Club House

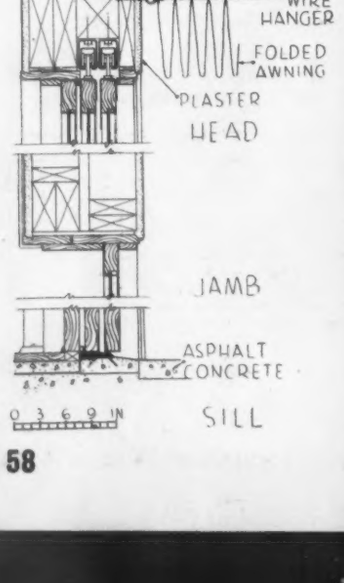
This building was first intended for a nursery school; now it houses facilities for games, rental library, darkroom, kitchen, parties. In the village are courts, etc., for several types of games. Nearby are four public golf courses; a playground adjoins.

urably higher than those in other large-scale housing, public or private.

It has always seemed to me that the minimum standards developed by USHA for permanent public housing were in some respects too low— particularly in the matter of space, exterior and interior. Since much war housing has necessarily pared even these standards down still further, the whole subject requires fresh, careful study.

All housing costs are subject to varied conditions dependent on time and place. And in the early 1940's other fluctuating conditions entered the picture which make any rigid comparison difficult if not impossible. Nevertheless the Los Angeles City Housing Authority, an efficient agency which employs good architects and has achieved about the highest local level of public housing quality in the country, did build a number of projects at about the same time as Baldwin Village. And perhaps it may be worth while to set down a few figures on some of these projects next to the figures for the Village, to see what suggestions they offer. (See table.) I would have liked to include the Metropolitan Life Insurance Company's Los Angeles project, but figures were not readily available.

The overall cost per dwelling unit for Baldwin Village is $4911, and the average for the five public projects is $4385—11% lower, or a difference of $526 per family. This is not a fair comparison, however, due to the high cost of central sites and slum clearance for three of the public projects. From a planning point of view this is very significant, of course, and these few figures indicate difficulties in the way of any central redevelopment which includes modern amenity and decent space standards. They also tend to show that use of cheap outlying property entails land costs relatively so small that density can be very low indeed—lower, in many instances, than the old USHA prescriptions. For a



". . . pool, waterless until someone figures out a way to keep babies out of it . . ." was designed for children to wade in.

closer comparison it seems desirable to eliminate the land factor and also, because its peculiar site resulted in abnormal land development costs, to exclude Channel Heights entirely. Excluding land the cost per unit of Baldwin Village is $4597, and the average for the four public projects is $3547 . . . 23% lower, or a difference of $1050 per family.

No resounding generalizations should be drawn from these figures, which are only roughly comparable. But perhaps it would be reasonable to claim some evidence that, excluding the land and location factor, permanent community housing of "decent, safe, and sanitary" but minimum standards cost 20% to 25% less than community housing of luxury standards in Los Angeles in the early 1940's. What does one get for this extra $1000?

Landscaping and outdoor recreational and service areas much more highly developed than in public projects, and covering about twice as much open space per family;

Garages; lawn sprinkler system; laundries with enclosed drying yards; enclosed playgrounds; athletic facilities;

Private patios and balconies;

Much larger rooms, particularly living-dining areas; luxurious storage space;

Better heating and hot water systems, plumbing and electric installations;

Oak floors, tile baths, stainless steel drainboards, Venetian blinds, etc.;

Many fireplaces, some extra bathrooms.

This is a lot, and few would feel that *all* of it is necessary in public housing . . . or in cooperative or other forms of enterprise to meet the needs of that famous "middle" group. But surely there is evidence that even 10% more leeway in the costs and standards of "minimum" modern housing might bring a social return much greater than 10% in more space, more amenity, and more convenience.

Perhaps the most significant single item is the cost of site improvements, landscaping, and utilities. The cost per unit for Baldwin Hills Village is $637, for the public projects (excluding Channel Heights) $403 . . . only $234 difference, although the Village has only half the density of population, and open space far more highly developed for varied use and beauty than do the public projects. (Some allowance should probably be made on the other side, however, for the extra cost of footings and such in clearance projects.)

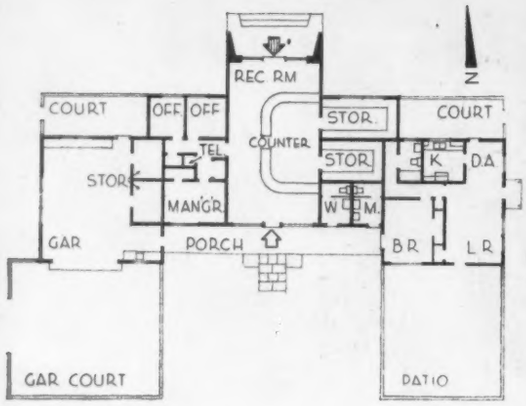
Some discrepancy appears, it should be noted, in the item on Community Buildings, since the figure for Baldwin Village does not include the cost of the nursery school, shop,

COSTS PER DWELLING UNIT

Project	BALDWIN HILLS VILLAGE	PICO GARDENS	ALISO VILLAGE	ROSE HILL COURTS	HACIENDA VILLAGE	CHANNEL HEIGHTS	AVERAGE COST FOR PUBLIC PROJECTS
Sponsorship	Private, FHA Insured	Los Angeles City Housing Authority; mostly for war workers, but all "permanent," all but Channel Heights built under U. S. Housing Act.					
No. Units	627	260	802	100	184	600	
Construction	Stucco, wood frame (ex. 9% masonry)	Stucco, wood frame	Some masonry; some stucco, wood frame	Stucco, wood frame	Wood, stucco, wood frame	Wood, stucco, wood frame	
Families per gross acre	7	16	19	16	10	9	
Height	2 story, some 1	2 story	2 and 3 story	1 and 2 story	1 story	1 and 2 story	
Rooms per unit	4.3 (FHA count)	5.2 (FPHA)	4.3 (FPHA)	4.4 (FPHA)	4.3 (FPHA)	4.2 (FPHA)	
Contract awarded	Feb. '41	Jan. '42	Feb. '42	Dec. '41	Nov. '41	May '42	
Completed[1]	Oct. '42	Aug. '42	Mar. '43	June '42	July '42	July '43	
COSTS: Land	$314	$1311[2]	$1022[2]	$796[2]	$279	$103	
Site impvmt.[3]	637	407	437	357	412	1163[4]	
Dwelling construction[5]	3730	2977	3441	2912	2704	2825	
Garages	138	none	none	none	none	none	
Community buildings	92[6]	107	132	165	138	236	
TOTAL PHYSICAL COST PER UNIT	$4911	$4802	$5032	$4230	$3533	$4327	$4385
TOTAL, EXCLUDING LAND	$4597	$3491	$4010	$3434	$3254	—	$3547[7]

NOTES: Figures include: Contractor's, architect's, engineer's fees, supervision. Excluded are carrying charges, pre-occupancy, administrative, or financial expenses.
[1], occupancy often earlier. [2], including slum clearance. [3], including utilities and landscaping. [4], extremely rough site. [5], including equipment. [6], including administration, club, and laundry buildings, but not dwellings now used for nursery school, etc. [7], excluding Channel Heights.

Administration Building



FLOOR PLAN 0 10 20 FT

All administrative functions are carried on in this building, whose area seems adequate even for such abnormal functions as the telephone exchange (required because of war conditions). The central hall, where most tenant business is carried on, is high and airy, with clerestory light coming in over the entrance doors through ribbed glass. The lower part of the opposite wall is clear glass (see photo, page 44) and through it one can look across a formal garden to the Club House. Above the glass is a mural by Rico Le Brun.

etc. temporarily transformed from dwelling units while some of the public projects include these facilities.

If these few superficial figures help to stimulate some organization to initiate a thorough cost analysis, from the angle of standards and quality, of our vast and varied experience with large-scale housing, public and private, they will have served their purpose. Such an analysis should of course go much farther than a mere breakdown of capital costs. In annual costs—which are what tenants and owners actually pay—operation, maintenance, and repairs, interest and amortization rates, are just as important as first costs. Some figures before me seem to indicate that there is surprisingly little difference between the operating and maintenance costs of Baldwin Village and that of public projects. But they require much more exact definition.

To summarize the improvements upon "minimum standards" which seem to me most vitally needed:

1. Lower densities. (On cheap land this can be achieved with little, if any, added cost. Expensive central sites will require special subsidies toward land acquisition—already recognized as the heart of Urban Redevelopment policy.)
2. Bigger rooms and more storage and utility space.
3. Space for *private* outdoor living for every family, whether in patios, enclosed gardens, or good-sized balconies.

Baldwin Hills Village leads the entire housing field in all three of these qualities. That is the basic reason for its markedly greater livability and attractiveness.

Reception Room

Exterior from Rodeo Rd.

Perspectives

A Head, Heart, a Soul, and a Purpose:

Robert Evans Alexander

Editorial Note: We asked Larry Perkins of the Chicago firm, Perkins, Wheeler, and Will, to do a piece on his friend, Bob Alexander, one of the architects of Baldwin Hills Village. In the course of reviving memories and getting up to date, Larry received from Bob a long, revealing letter on the stationery of a famous aircraft company where Bob is now a departmental executive. Part of the letter follows:

"As you know, I was hired by Vega—now Lockheed, Factory A—in 1942, and haven't been found out yet. I have been in the Production Control Division during this time, and have lost plenty of hair off my head in the process. This has been compensated for by a corresponding growth on my chest. At present, I am engaged in what some call Industrial Engineering—finding ways and means to produce more and better service for less cost . . . (For a while) I was in a fury of work . . . Things have cooled off noticeably since we overcame the problem of multiplying production by five. The planes are rolling out as fast as ever, but with one-third less effort . . ."

The key to Bob as an architect is contained in these phrases: "more and better service for less," and "the planes are rolling out as fast with one-third less effort." Notice that he landed in production control—probably after vigorous persuasion to stay out of plant maintenance drafting. He is where he can apply a flaming creative imagination to the problems of "one-third less effort." I seriously doubt that he hasn't been found out yet; nor does the manpower shortage account for his continuing where he is. What more logical place could there be for a mind trained to plan, visualize, and act than in improving methods of doing things? This job Bob holds is a distinct contribution to a profession which is fighting out from behind the impractical dreamer reputation; for, make no mistake, this is no hybrid "Architectural Engineer" or practical man. In the old sense he would be considered a plain, straight designer and a red hot one at that.

Robert Evans Alexander is concerned with beauty—he draws fast and accurately—his sketches are vigorous and brilliant. Here he is applying an ability to analyze and synthesize a set of conditions (as we all tell our clients we do) not related to building—and it works! Well—so it should; but the public and the profession can absorb such object lessons as this one to advantage.

Organizing a production situation to get high results at low cost is not a new experience for Bob. Lakewood Village, for which he was one of the architects, made one of the unsung contributions to the "Construction Industry" (quotation marks at request of R. E. Alexander). This was built as war housing near Los Angeles. Its significance is that a varied and interesting city was created out of—if I remember correctly—seven basic plans. The most impressive thing about the drawings was a series of schedules for each component of the building. Nearly the whole project was in code. House 3 on location 215 had its two-car garage in position 5. It had roof R3 and entrance E2. It had basic color 17 and trim color 12 on material 4.

This keyed back to a mill set up on the site. When a trainload of lumber arrived, the operator knew that he could cut 376 studs, 8′-16″, and 48 facia boards, size so and so. Bob could and did organize mass production economics right where they counted most: at the site. The foundation man could organize and repeat; ditto the plumber and painter. The advantages hoped for in prefabrication were here largely realized with the sky for a factory roof. Very low costs were achieved, and in my opinion it was because the original design, in which Bob had a leading part, was conceived around repetitive, mass-produced parts for everything.

This schedule was also simple enough for a real estate salesman to understand and use in selling. With the key schedule photographed down, he could consult his notebook and tell the prospective customer: "This hole in the ground will have plan C, the one that fits your needs. The garage will be in this location (position "C"), the entrance #4 will look like that one over there, and furthermore it will not be a repeat of anything else here. It will be *your* house." In short, the well composed themes and variations in color and form were as apparent on the schedule charts as the harmonies and movements in the score of a symphony.

This impressive performance (which led, I presume, to the present aircraft job) was no isolated outburst. As a member of the firm of Wilson, Merrill and Alexander, associated with Reginald D. Johnson, Bob was very active in the work on Baldwin Hills Village. This project started toward life under the name "Thousand Gardens," which Bob promptly corrupted to "Lots O' Plots." In spite of this irreverent attitude he carried entire charge of working drawing production, both architectural and

engineering, as well as taking an active part in the site planning and unit design.

Bob is a man to act on his convictions. When he was a new partner in his firm and could have justified a feeling of having arrived, he decided that he didn't know enough about housing, so he took a year's leave to go back to New York to work on Parkchester for Metropolitan Life's Board of Design. It took some nerve to go back on a salary after denying himself and his family plenty to get the position he had won. His own description of his duties connected with Parkchester is: "Set up and ran production of building plans, unit plans, and coordinated these with other departments." R. H. Shreve was his boss, Irwin Clavan, the Office Manager, and Walter Graydon, Chief of Production.

From 1939 to 1942, in the firm of Alexander, Risley, Witmer and Watson, he worked on the Estrada Courts housing project in Los Angeles. I shall not soon forget the ingenuity of the detail of that job. For instance, the little balconies derive stiffness for their supports by taking advantage of the compressive qualities of the plaster inside the wall. Bob has done plenty of other work but this is not the place for a catalog.

Bob is 37 years old, married, and has two children, a girl, 9, and a boy, 5. In the seventeen years I have known him, in school and since, he has not bored me once. He is an enthusiast. He was an ardent air raid warden. He had fun playing football at Cornell, where he not only won his letter on the varsity team, but earned his Bachelor of Architecture degree. I remember a hostess who has not forgotten a series of flying leaps from the arms of a fragile chair in pursuit of a circus inspiration. I remember many fevered discussions of politics and architectural philosophy against a background of highballs and the Franck D Minor Symphony. I once worked beside him all night when I didn't have to, rather than miss the show.

After Cornell, Bob worked in offices in both California and New York. In the summer of 1930, he accompanied Garrett Van Pelt on a European trip that took them to France, Spain, and Italy.

Being too serious has never been one of his faults. In response to some probing questions he supplied the following: *"As to habits, you know I smoke too much and have other habits which I shall not define as good or bad. I do have the bad habit of hanging my head, but not in shame. It started when I was a rather tall little boy. My best friend was a little shaver who made me feel out of place if I stood up straight. Rather than walk on my knees* all *the time, I broke my neck, slightly. This was abetted by several years of saxophone playing and given the coup by sleeping on drafting boards.*

"I like any *kind of fishing and intend to do just that at Ensenada August 1st to 12th. I like Leiderkranz cheese and strong black coffee (just had some). Read Time, Life, Readers' Digest, Arts and Architecture, and the new Journal of the A.I.A."*

Bob becomes wholly serious when discussing the status of the profession, the things he believes that it not only could but should do. *"Architecture* can *supply the greatest need in our culture today—creative thought,"* he asserts. To accomplish this task, he feels it is incumbent on the wiser heads to devote more time to serious study of all phases of human endeavor, and to insist that architectural education be realigned for this broader approach. *"Teach two generations how to analyze, visualize, and plan*—nothing more," he advocates. *"Readjust State laws and professional society by-laws to recognize the new ideal. Take architects to the people. Make 'Architect of the Peace' no empty phrase."*

With adoption of this bold, affirmative philosophy, Bob Alexander foresees an ever-widening field for the architectural man's talents. If the profession and the individuals that make it up will view their opportunity enlarged to this scale, Bob confidently expects to find architects holding rightful places on City Councils, in State governments, and in Congress; architects in food dehydration plants, in helicopter factories, on land-reclamation authorities; more architects of airports, dams, and canals. *"I am quite serious when I say that this country may not survive unless such a program is carried out by some profession. The element of creative thought must be developed, expanded, and introduced into government and industry.*

"Architectural training has the advantage of a head start in the right direction and could *supply it,"* he concludes. *"I believe it will."*

As to Bob's hopes for the future of architecture and building, again let him speak for himself. (I can't add to it except to comment that Bob's unabashed idealism has not kept him from effective positions on important work in the past. I think he will continue to cause things to happen.)

"I hoped to learn something about industrial methods which could be applied to the so-called 'Construction Industry' (sic). I believe I know now what is ahead of us and what it takes to remove the laugh from this phrase. I know what could *be done if even a handful of the great companies in this field got together with labor and government* now, *when resistance to change is at low ebb. But I am just as sure what* will *happen if we delay our planning until the heat of the battle of peace is upon us.*

"Today, the grand strategy of the 'industry' should be planned. More can be done in two years before peace than in twenty years after. There never before was an opportunity like it and it won't knock twice. All objections to the industrialized house vanish when you assume the lower third income bracket moving into the middle third range and the house cost cut in two, three, or more. I'm sure it's coming, but it has little relation to 'reconversion.' It is not even conversion. It is revolution, or creation of something which never existed before.

"You probably gather that I don't give a damn for the Big House, the Small House, the Country House or the Town House. I want the Best House and the Most House for the Best People, i.e., the Most People, the 80% we never touched before. And it must be unobtrusive as a house, the little house that isn't there. You are living on a bit of earth. The inside is the outside and vice versa. Your house is not a burden, financially or physically. It protects and comforts and helps you live.

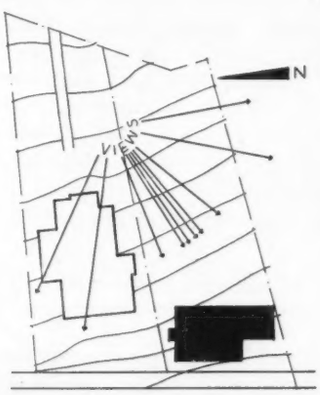
"But you *know the form of the house is absolutely unimportant. In the field of form, the community plan is the only important thing. It must have size and shape, a center, a head, heart, a soul, and a purpose. Which reminds me—I just read Thomas Wolfe's 'You Can't Go Home Again' and I recommend it as the best criticism of city planning yet. He knew what the score was and called it every time. City planning is my main dish, so I won't elaborate on it.*

"As to clients, I've seen 'em all, and I give up with one exception. Tomorrow's client is the people *and it is not a beast. From the little experience I have had with such, I believe the clients with whom I can talk the most sense and really get down to earth in the future are the labor unions, cooperatives, and like woolly characters. We must take architecture to the people and vice versa or kiss the boys good-bye."*

LARRY PERKINS

Photos by Roger Sturtevant

From the end, the hillside apartment-garage structure forms a bold pattern of redwood and plaster walls.



Intermediate Step in a 3-Way Plan

Berkeley, California

WILLIAM WILSON WURSTER, A.I.A., ARCHITECT

This unusual unit of a small apartment above four garages, interesting enough in itself, is considerably more than meets the eye. A study of the plot plan shows how it actually is the crux of a situation, serving as it does to inject new life into an old house next door and constituting an important element of a building plan that

On Outwitting Obsolescence . . . . . .

That the whole community benefits from intelligent, over-all planning, including land-use control, is clearly demonstrated in Baldwin Hills Village. Perhaps no one advantage is more obvious—or more welcome to tenant, landowner, and municipality alike—than the insurance this type of long-range planning provides against the factor of obsolescence which is the inevitable, ugly by-product of uncontrolled city building. Obsolescence, like disease, usually creeps up unobserved. Similarly it is best treated when prevented.

In succeeding pages, we show several samples of how good planning can outwit obsolescence. Some—like Baldwin Hills—are instances of prevention: an income-producing unit in California; TVA's latest developments in demountable houses; and a country house in New England, skeleton-framed to allow for future alterations. Others, in the form of remodeling projects, demonstrate successful cures for cases of incipient obsolescence.

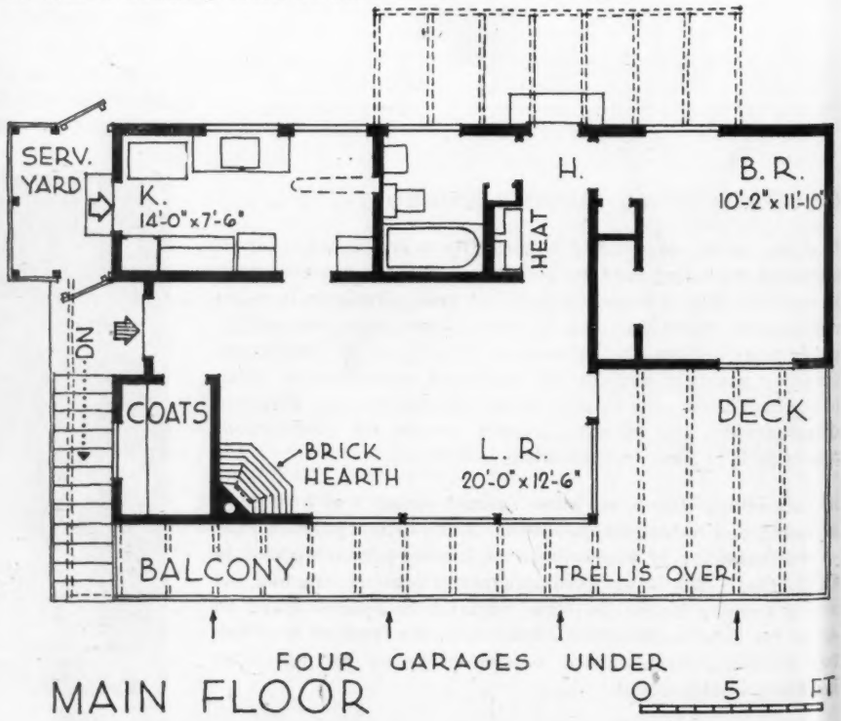
The apartment deck and balcony (above)

The garden side of the house is protected against the strong prevailing winds (below)

will go forward after the war.

The owner acquired two adjoining lots; one was vacant; on the other was a substantial but dated, two-apartment house, for which there were no garages. Actually, the best location for a house on the entire property was on the higher ground at the rear from which extraordinary views of San Francisco Bay area open up. But it was impractical at once to build this final house. With the architect's advice, the connecting-link structure shown here was worked out.

If ever a building could be said to kill two birds with

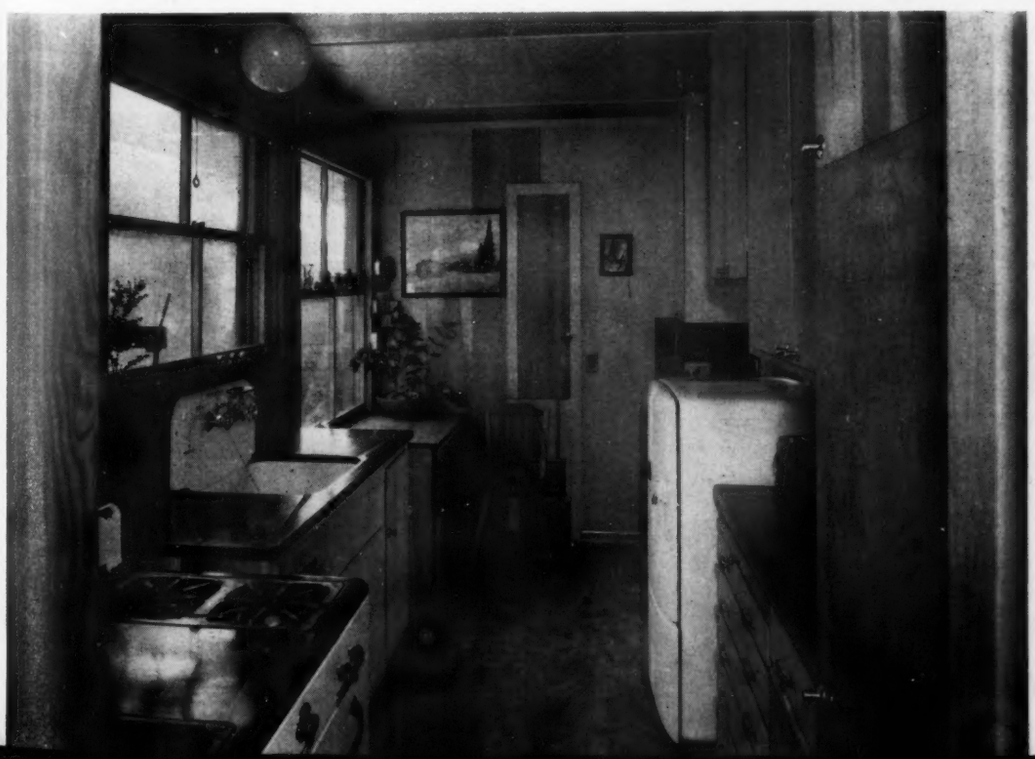


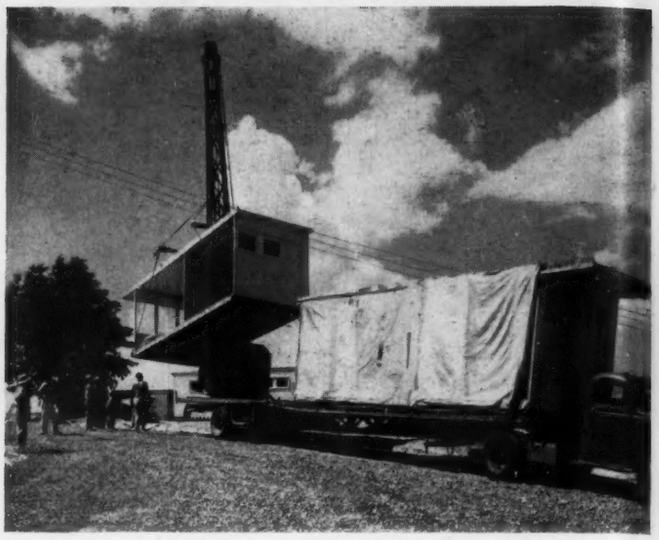
MAIN FLOOR

one stone, this is it. The two apartments next door are each now provided with a garage which considerably enhances their value as rental units. There is car space for the fine little new apartment, which in itself is an excellent temporary abode. And when it becomes possible to build the final home on the upper part of the property, this will have a garage already built. Meantime, the fourth garage is a good rental unit; and when the postwar house is built, the apartment will undoubtedly be easy to rent, for the University of California is not far distant, and good facilities of this nature are much in demand.

The floor of the living room (above) is hardwood; walls are of pine plywood. The windows frame a typically dramatic San Francisco view. For heating, a gas unit is supplemented by a Franklin stove in one corner of the room shown in this photograph.

In the kitchen, as well as in the bathroom, the floor is finished in linoleum. The walls, here as elsewhere in the house, are plywood-surfaced.





TVA Three-Dimensional Demountables

Quantity-Assembled by Power Crane

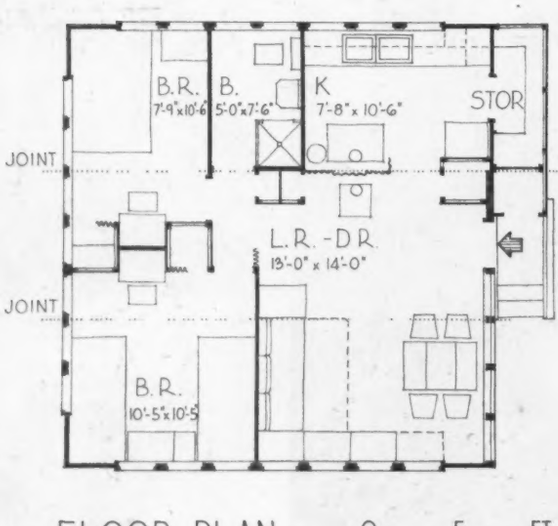
In addition to the possibility of providing mass markets with serviceable, permanent dwelling units at low cost, prefabrication offers a flexible device for outwitting extraordinary forms of obsolescence. For communities of a temporary, uncertain, or fast-changing character, the technique makes it possible to "knock down" a single house—or a whole village for that matter—transport it on trucks, and reassemble it in some more promising location. Hardly a "long-haired" theory, it is a practice already repeated many times under the war demand for providing good housing at unlikely places on the double quick.

To architects whose chief concern is planning for the betterment of human environment, it is cause for rejoicing that with the advent of these standardized units, TVA has set so high a standard.

The ones shown on these pages are the largest and most technically refined of TVA's three-dimensional prefabs to date. It is also significant that, according to the records, the manufacturers who undertook contracts for the work ended up with satisfactory financial results.

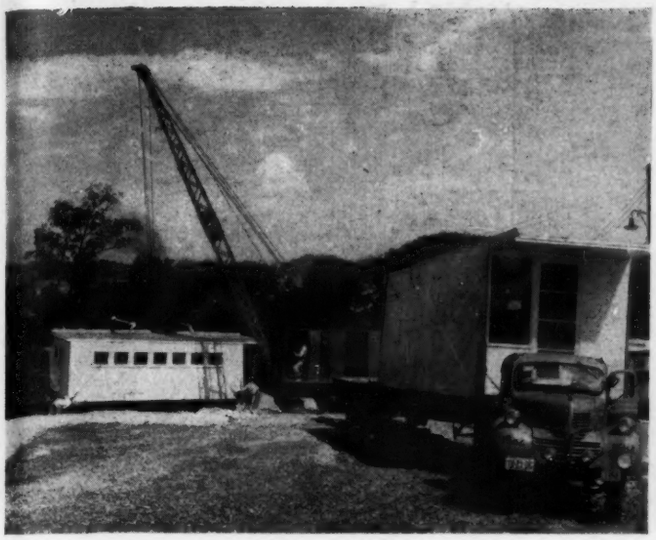
In these projects, involving large-scale installation of the units, a provocative new technique of unit assembly is introduced through use of boom crane, transforming a somewhat cumbersome operation into a readily answered mechanical problem. TVA architects are the first to point out, however, that so far, the expense involved in commanding the services of so specialized and huge a building tool makes this technique impractical except in the case of sizable developments. Nor, as they remind us, is crane assembly in any sense a *sine qua non* for the three-dimensional prefab's success. On previous projects, house sections have been placed on foundations by the use of nothing more complicated than ordinary truck jacks and old railroad ties for cribbing.

Nonetheless, the tempo made possible by the power crane's employment opens up challenging new areas for research and experiment. There appears to be no reason why the method could not easily be used for constructing two-story (or higher) structures from three-dimensional parts similar to the ones shown here. The photographs on this page record the latest chapter in the progress of TVA's demountables along the road to quick assembly at the site.



FLOOR PLAN 0 5 FT

General view of 2-bedroom unit



Far left: Transport of prefabricated house sections; each section is 8' x 24' plus roof overhangs. Sections have been transported in this manner for as far as 700 miles. Other views show assembly of sections that have been delivered on a 55-foot long trailer body instead of on the truck and trailer combination shown in first photo.

Sections are hoisted by a crane by means of hooks at the end of wire ropes that support steel angles placed under the short end of sections. In this case, the foundations are creosoted lumber, as these dwelling units are temporarily located to serve a war purpose. In more permanent situations, foundations of cinder block, asbestos board sheathing on wood or masonry posts, and shiplap or tongue and groove siding have been used to create a better and more conventional appearance.

Notice how few workmen are engaged on the site. On sectionally prefabricated houses, total labor costs divide about 90 to 95 percent in the shop and in transportation, and 5 to 10 percent on the site. This may prove a distinct advantage in the postwar period for sites in rural locations where a large labor force is not available.

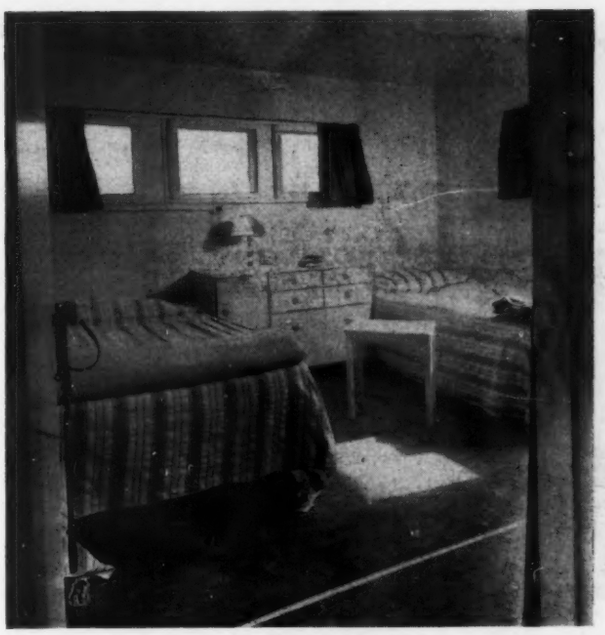
The Three-Section, Two-Bedroom House

The 3'-6" roof overhang protects the entrance door and controls sunlight. Beyond the stoop, the projection covers a storage section which was prefabricated in panels but erected on the job. Since this detail proved the most bothersome of all assembly problems, in future designs these will be sectionally prefabricated like the rest of the house.

In some particulars, the house departs from TVA's design: the entrance feature (contractor designed); the mast for electric supply; and a dark-colored composition covering for roof joints in place of inconspicuous sheet metal channels.

The interiors show furniture supplied in accordance with TVA designs, under the same contract as the houses themselves. Cabinets are of ½-in. plywood built in modular sizes to coincide with window and room dimensions. The bridge-playing photograph shows the use of the dining table, one leaf of which is open; with both leaves open, the table seats six. With both leaves dropped, the table takes its position as part of a sequence of cabinets; the chairs are collapsible. The big windows in the living room are fixed glass, whereas the high-sill windows operate in awning fashion.

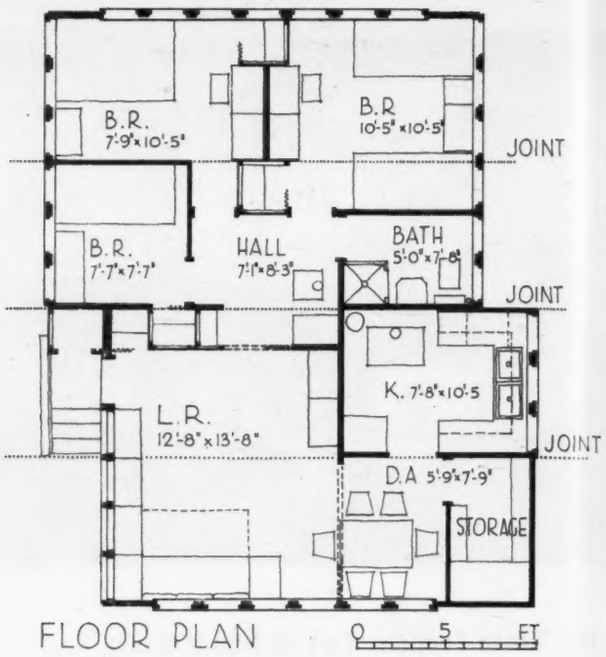
In the bedroom, all windows are high because of the expectation that during wartime the houses will be crowded close together, and high sills will increase privacy. Walls of this room, as throughout the house, are plywood with a pigmented varnish. The ceiling is the exposed plywood underside of the stressed-skin roof panel.



Typical bedroom, using TVA modular furniture

Two views of the living room. The floors are surfaced with linoleum

General view of 3-bedroom unit



Looking toward the dining alcove

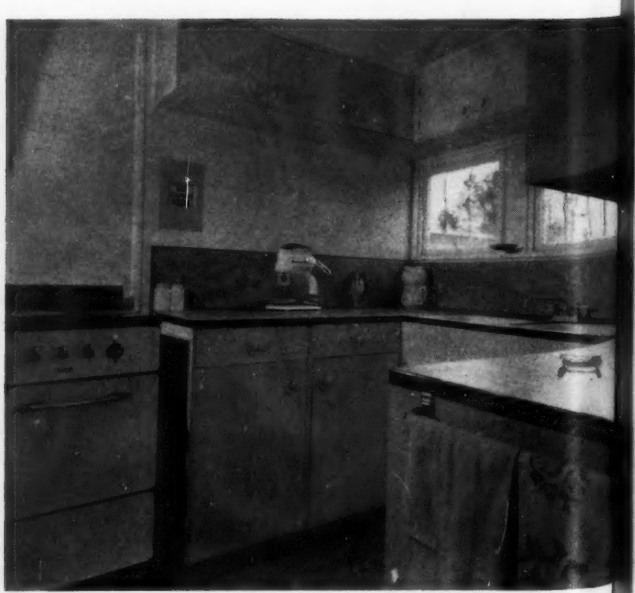
The Four-Section, Three-Bedroom House

DESIGNED BY TVA

As in the case of the two-bedroom houses shown on the preceding page, the entrance detail, roof-joint covering and power-line masts are deviations from TVA's design. Also, in this case, tenant-owned furniture was used in place of the TVA modular furniture. A roof overhang on the three-bedroom houses protects the stoop entrance and fixed living room windows; in assembling this house, the four sections or cells are staggered in pairs on the foundations, so that the overhang is reversed on the two cells containing the bedrooms; this device both insures cross ventilation in rainy weather and adds considerably to the appearance of the house. House heating is by coal, with the choice of heater limited to those available in wartime; if available, electricity, gas or oil units could be used quite as well. The kitchen equipment is arranged in a U shape and has cabinets at an intermediate height (right of photo) as well as base sections and continuous rows above the windows. Sinks and laundry tubs are built into a continuous row of base cabinets, with counter tops of linoleum, extended up the walls to sill height. Linoleum edgings and moldings are of plastic.

Living room, showing heater location

The U-shaped kitchen

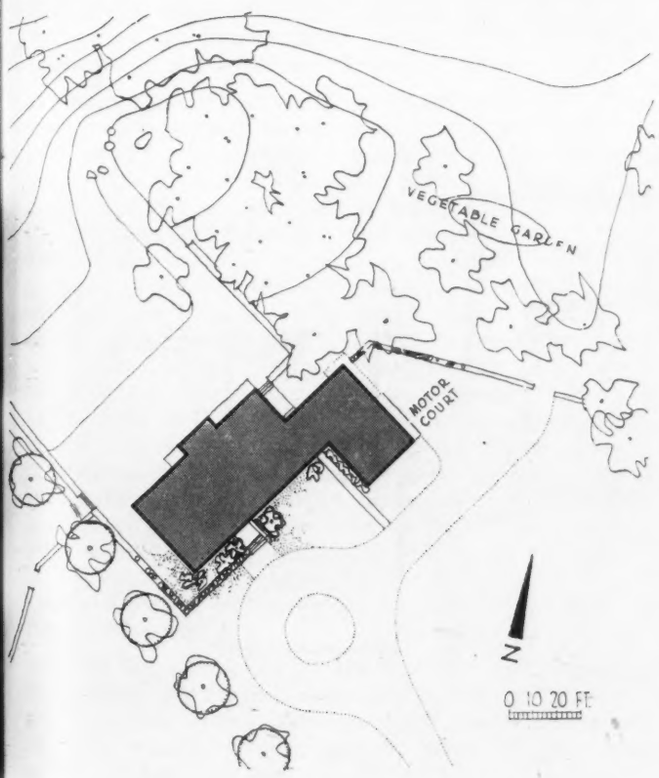


Cushing-Gellatly

"Cultivated land comes right to the house . . ."

A "Permanent Investment" Core Surrounded by a "Temporary Investment" Shell

Lincoln, Mass.



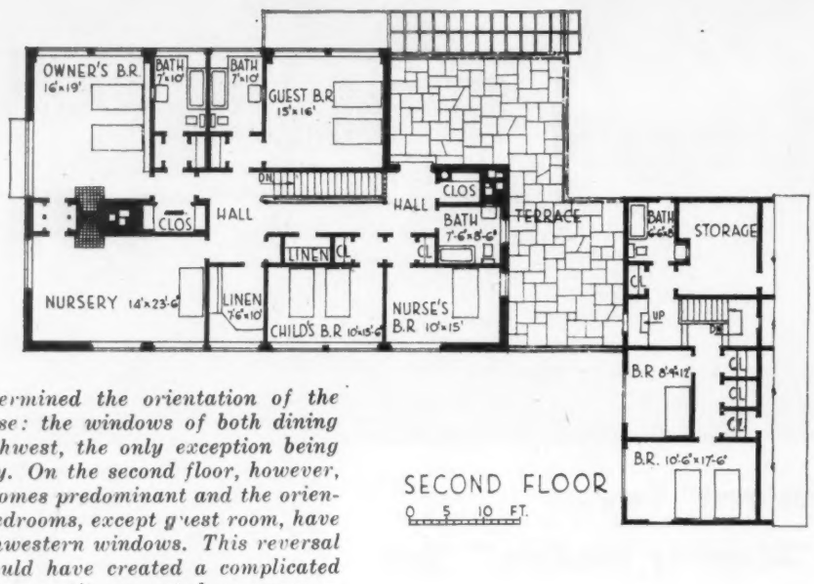
Description by CONSTANTIN A. PERTZOFF, ARCHITECT

We own fifty acres of land which we believe to be very beautiful and which is undoubtedly very New England. Ten acres are occupied by the apple orchard. The balance is a wooded valley which opens up to form a bay of a secluded little lake. The land is hilly; the house does not occupy its highest point, yet it is nearly 100 feet above sea level. The land has never been built upon but it is, in a sense, old land and parts of it have been cultivated generations ago. It shares fully in that charming geometry of human work of the past that is so characteristic of New England landscape: the tracery of old stone walls crosses the woods, runs down to the lake, is revealed by the young orchard. This geometry has been recognized in the design of the many new stone walls that surround the house. The land has an old name dating back to the Biblical days of New England: "Canaan pastures."

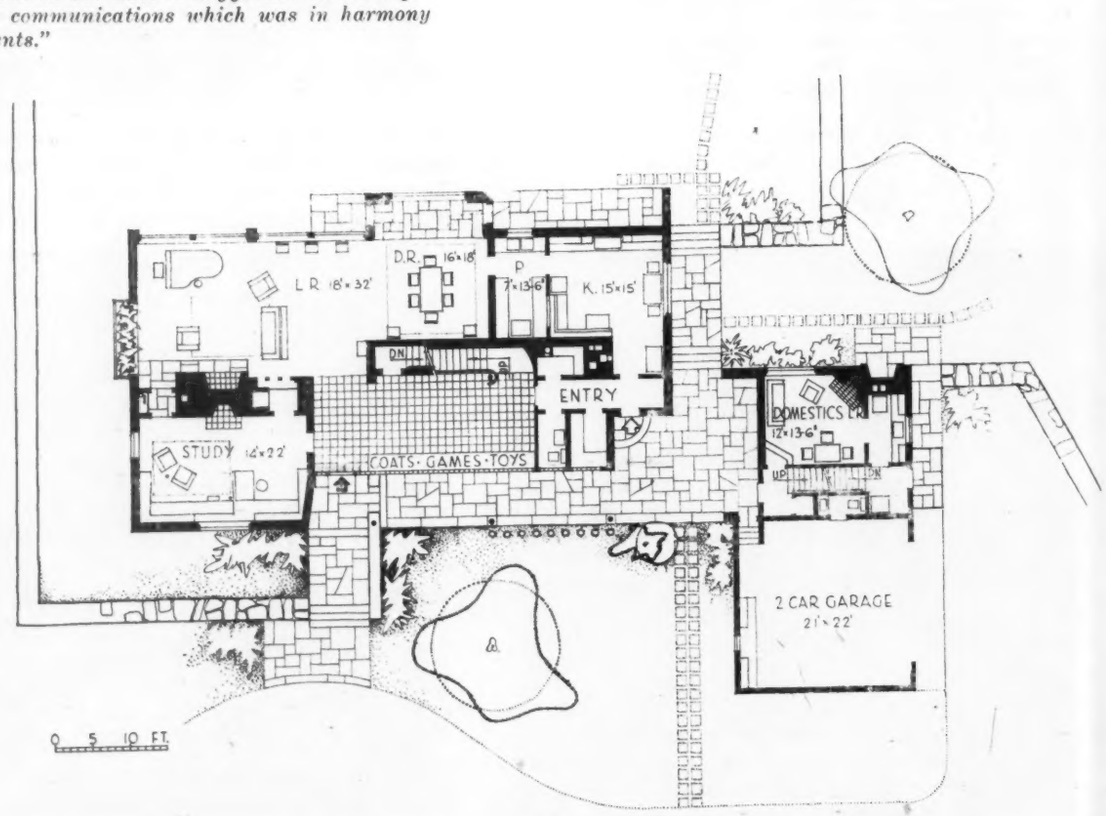
This land, its contours, its use, its "geometry," the magnificent fifty-mile view of distant mountains beyond the lake—above all, its very distinct personality—not only determined the layout of the grounds, the location and orientation of the house, but influenced to a certain degree its design as well.

The house stands on two or three fairly level acres between the orchard and the valley. Cultivated land comes

"The position of the service wing . . . is identical with the position of a barn in a New England homestead . . ."



"The exceptional view determined the orientation of the principal rooms of the house: the windows of both dining and living rooms face northwest, the only exception being the southwestern flower bay. On the second floor, however, the question of sunshine becomes predominant and the orientation reverses itself—all bedrooms, except guest room, have either southeastern or southwestern windows. This reversal of orientation normally would have created a complicated planning problem but in our case it suggested an arrangement of first floor communications which was in harmony with our requirements."



On the view side, lawns merge into a meadow forming an open space of nearly an acre

right to the house, orchard on one side, rather extensive vegetable garden on the other. Lawns are cut down to a minimum except in the view side where they merge into a meadow forming an open space of nearly an acre. The fundamental aesthetic relationship between the house and the land is identical with the one long ago established in the New England landscape. It is essentially the relationship of contrast: in this case, as in the case of many farmhouses, it is the contrast between a simple, white, geometric form and an ungroomed but mellowed landscape. I believe that utmost simplicity and clarity of form is of fundamental importance in this relationship. I tried to achieve this clarity of form.

The house is a simple rectangle with an "L," the service wing, attached to it by an open passage. Both the house and the service wing have forms that are easily perceived. Their relationship is also clear. The house as a whole appears to "read" well even at a considerable distance. The position of the service wing is, by the way, identical with the traditional position of a barn in a New England farmstead: it shelters the house from the northern and northeastern storms. The single pitch roof of the wing offers the minimum wall area to the storm and the maximum to the sun. The roof itself appears to function as an effective deflector.

It was not our intention when we moved to Lincoln to lead in the country a suburban existence. We do not pretend to be farmers but our interest in the land goes beyond the lawn and the flower borders. Work in the garden, in the orchard, and in the woods very quickly became our chief recreation and sole exercise. In these days of shortages of everything, we take considerable pleasure in the fact that our land's production of apples and firewood is measured in scores of truckloads. Although we still seem to be able to secure adequate labor, a great deal of our production depends not only on our management, but on our actual participation. This use of the land quite properly influenced the design of the house. One instance of this influence is the prominence of communications between the house proper and the triangular court formed by the garage and the shed around which most of the equipment is stored and beyond which lie the vegetable gardens. Another instance is the absence of provisions for the lounging variety of "outdoor living" so overemphasized in modern residential architecture.

To take full advantage of the site, the house was endowed with a certain degree of transparency: there is an axial relationship between many doors and corresponding windows on the opposite walls; the front door is not only set in a glass block panel but is perforated as well; the open passage between the house and service wing which frames a very charming view is duplicated in the design of the shed.

Although as a rule we entertain moderately and informally, the house is taxed to its full capacity, once in a while, by a large musical gathering. On these occasions, the living room and the dining room function jointly as a music room. Circulation of the first floor was studied with due regard to the problem of handling these considerable gatherings. The entrance hall for this reason was made very spacious; the three principal rooms of the first floor are intercommunicating, can be used en suite and can be serviced from either end.

The only other unusual feature of the house is the complete separation of the servants' quarters from the house proper. The servants' quarters developed into a complete little house consisting of a living room, kitchen, two bedrooms, and bath. It has a sheltered connection with the main house through the basement and an open air one through the first floor passage. This arrangement makes possible the employment of a couple with a child; and furthermore it endows the house with a flexibility which may prove to be very valuable in these uncertain days: either the house or the service wing can be used independently with the other one closed or both can be used together as they are used now.

The clarity of form and the simplicity of relationship of various shapes preoccupied me fully as much in the design of the interior as they did in the exterior. Spaciousness was emphasized rather than size. The whole plan, particularly the arrangement of circulations, was deliberately kept as straightforward as possible. I believe the plan "reads" well; like the general mass of the house, it is easily grasped.

The materials used in the interior are in keeping with the general character of the house. With the sole exception of teak used in kitchen counters and in bathroom floors, all materials are native and some local. Most of the rooms are simply plastered and painted. Wallpaper is used in some rooms upstairs. There is only one paneled wall—it separates the living room from the work room.

The entire design is subordinated to a 16′ rhythm. This unit and its subdivision of 8′ and 4′ determined to a considerable extent the interior arrangement. I believe that a simple rhythm of this sort consistently carried through is not only an aesthetic asset but results in considerable simplication of the structure and consequent reduction of costs.

The construction problem was approached in the fol-

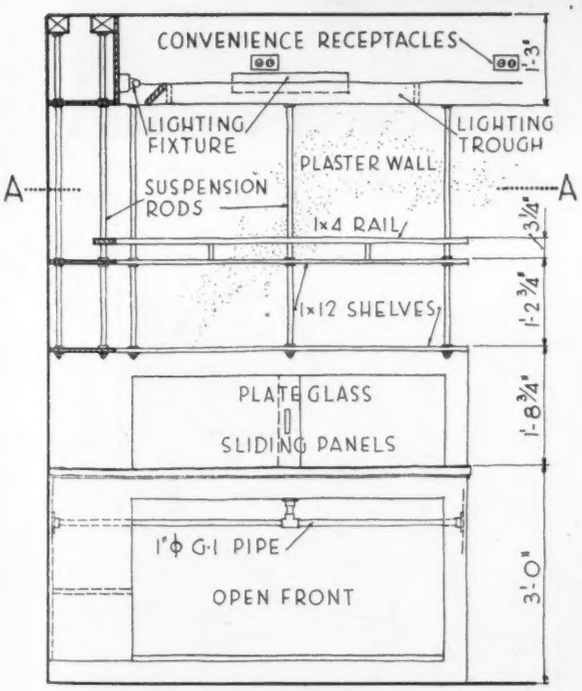
Main stair and floor of entrance hall are green slate, with natural cleft surface

"The skeleton construction is of particular importance. It is actually possible in our case to remove practically all exterior and interior walls of the main house without destroying the bulk of the investment. Needless to say, this offers unusual opportunities for future alterations of the plan, appearance, and even of function and purpose of the house. Our house of course is not even remotely the answer to the question of flexibility. It is merely a tentative step in what I think is the right direction. It only suggests a feasible alternate to that dream of real estate men—the house that would automatically fall apart as soon as the mortgage is paid up. It will certainly require no technological or any other revolution to make possible the construction of houses in which a highly durable primary structure will permit an easy rearrangement or replacement of all vertical surfaces, both exterior and interior. Granting the accessibility of mechanical equipment, a house of such type will have the faculty of renewing itself periodically without undue economic loss."

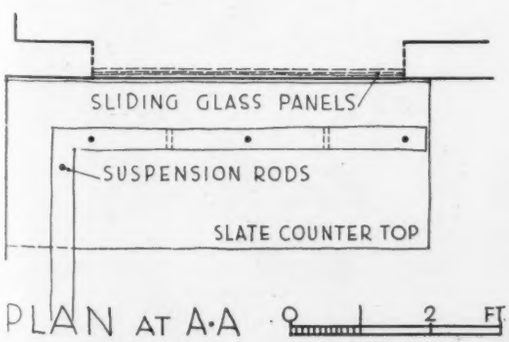
lowing way: I subdivided the problem according to the principal structural functions, studied these functions separately and tried to find in each case the best solution. The enclosure of space by vertical planes, the subdivision of the space by horizontal planes, and the bearing of loads I assumed to be these principal structural functions. One may argue that this brief list can be added to more or less indefinitely but in my opinion none but the above three affect directly the development of the structural philosophy of a given building. Even these three are not very easily separated from each other. For example, the principal function of the horizontal planes of the building—the floors—is, obviously, to carry loads and it seems absurd to consider this function separately. Only when one thinks in terms of columns and girders whose sole purpose is to carry loads—the membrane function of the floor becomes apparent.

In this case the primary frame is of fireproofed steel. The exterior walls which are non-bearing (except when one story high) were designed primarily to resist weather. These walls are of brick, 8″ thick, of a type developed by Professor Voss of Massachusetts Institute of Technology. The first floor is of re-enforced concrete and so is the paved terrace above the kitchen. These two slabs enclose in incombustible and fire-resisting shells those parts of the house where 90 percent of fires normally originate. All other horizontal surfaces of both house and service wing are of heavy timber "slow burning" construction. This construction was chosen because it gives a degree of fire protection quite adequate for a residence and because it is a great deal more flexible while considerably less expensive than re-enforced concrete. I did not consider lightweight unprotected steel floor construction because I am not satisfied with its fire resistance. The cost comparison of the heavy and light wood constructions is quite interesting. I will not go into details but I will say that the principal

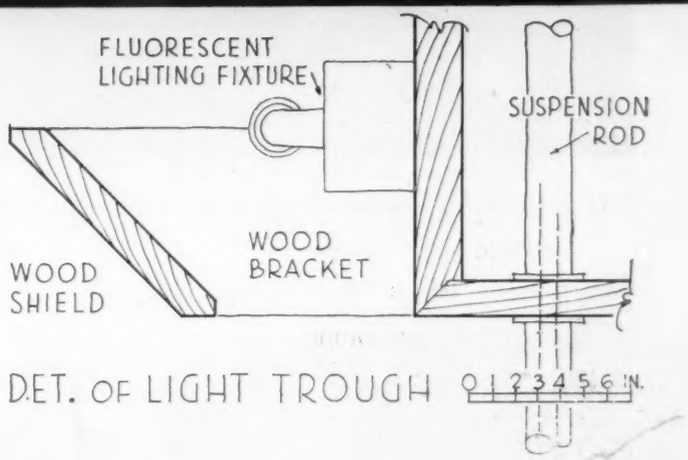
Living room paneling and the work room woodwork are white oak, waxed; the first floor is black walnut, also waxed; the second floor is white oak



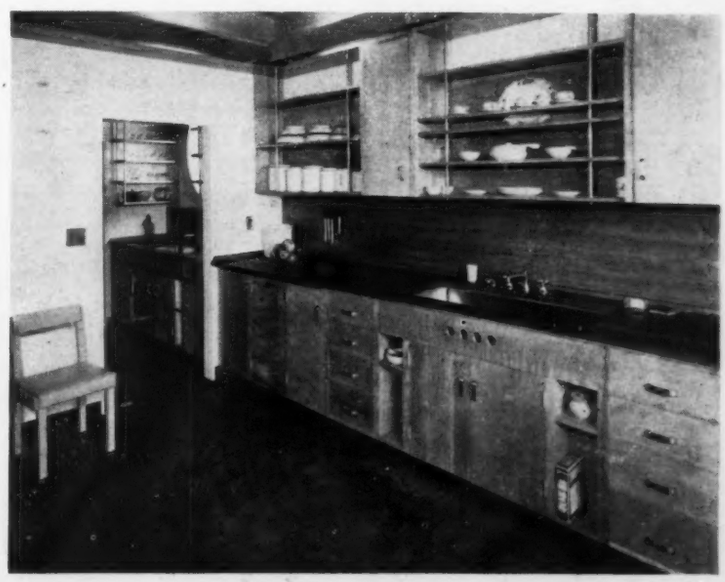
ELEVATION



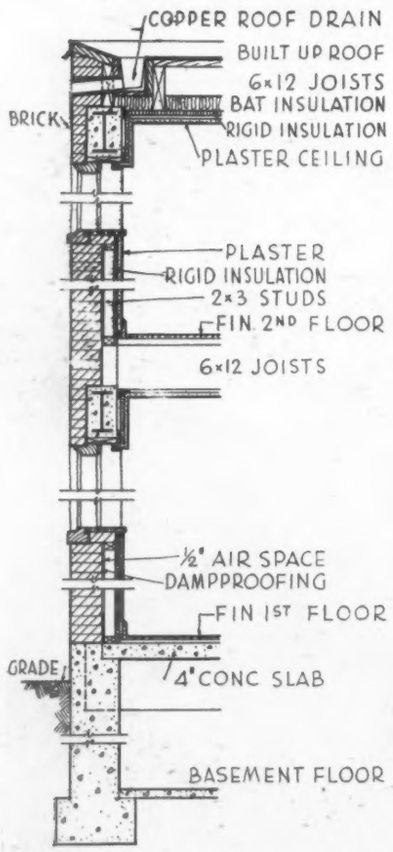
PLAN AT A-A 0 1 2 FT.



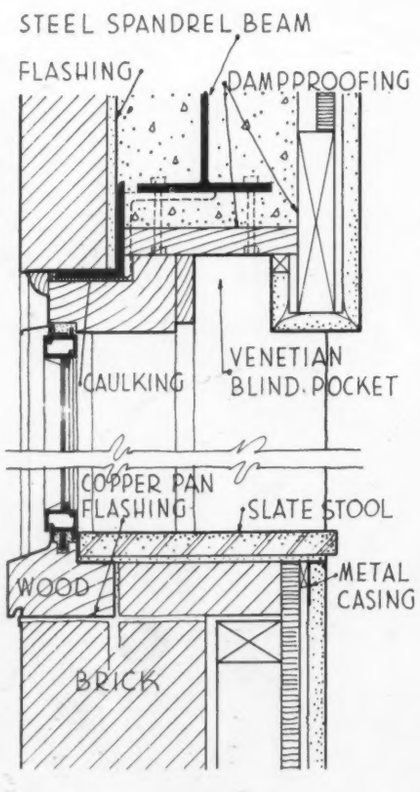
Kitchen and pantry cabinets and shelves are birch; treated with a solution of cellulose; work counters of teak are oiled



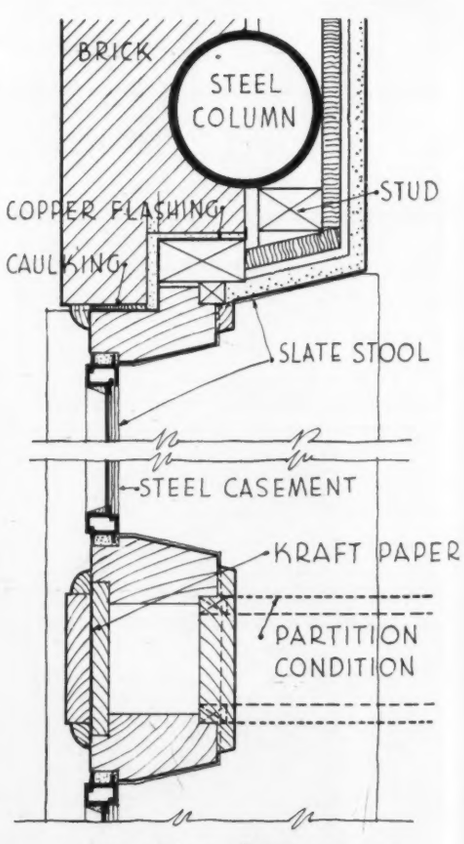
Floor of the dining room window bay (used as a radiant heating panel) is of purple slate



TYPICAL WALL SECT. 0 1 FT.



HEAD & SILL 0 6 IN



JAMB & MULLION

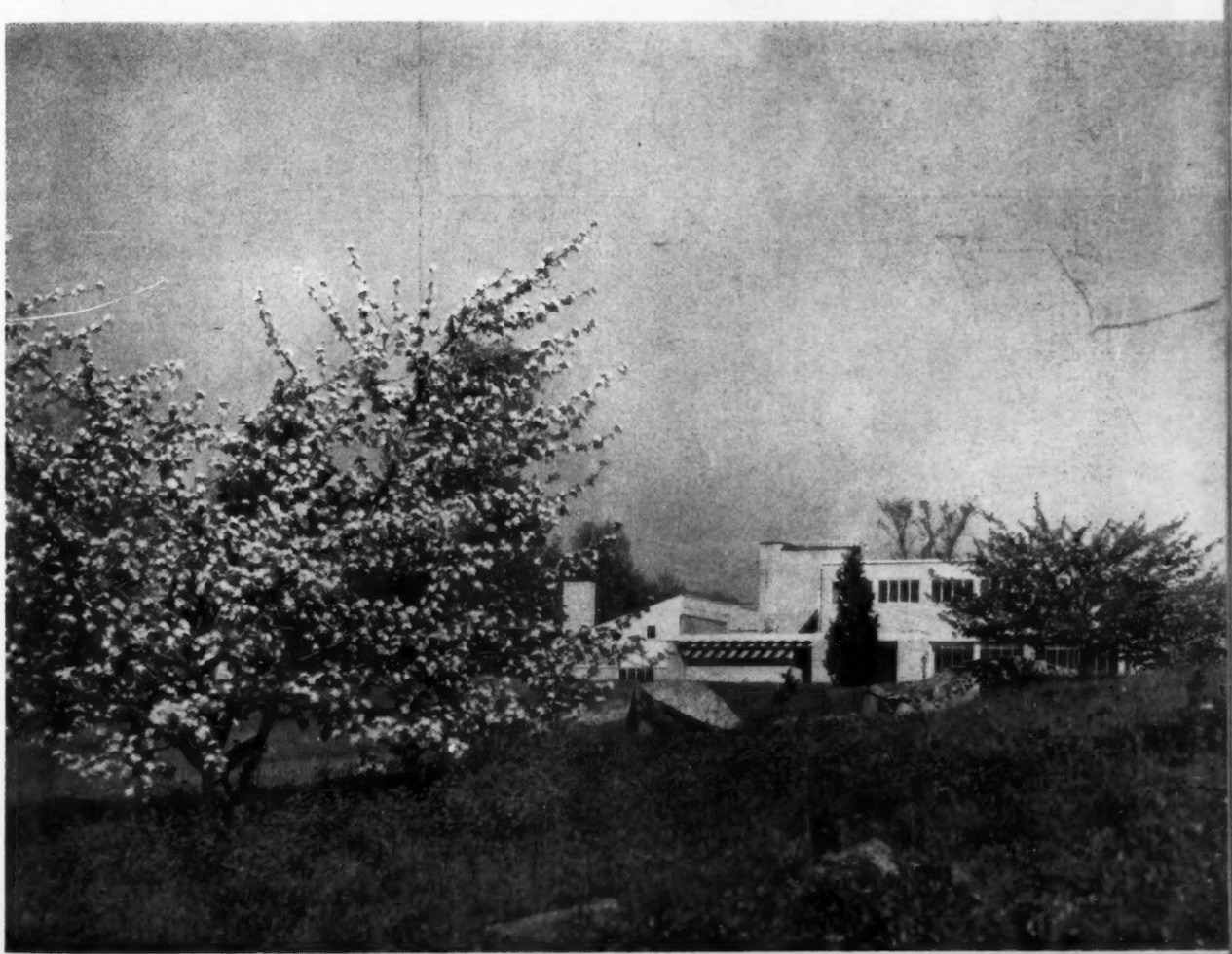
cost item is the increase of thickness of floor boards (from 7/8″ to 1¾″). There are other items of course but they are cancelled by various economies. Briefly speaking, there seems to be no reason why the increase in cost of construction caused by the use of heavy timber should exceed the value of one board foot per square foot of floor. In the case of our house, the total increase as compared to conventional wooden construction was about $200. Heavy timber construction has one advantage which is of very great importance from the standpoint of flexibility of the plan: it is possible to design it in a way that removes all limitation in placing of partitions. It virtually becomes "platform" construction.

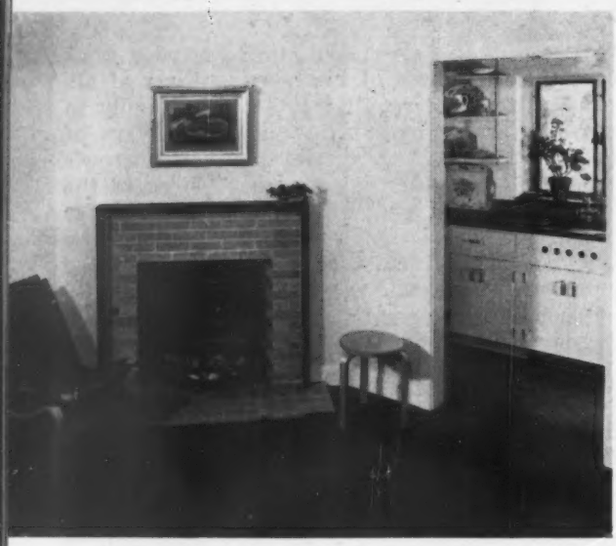
The conception of a functional house seems to have penetrated deep enough into the consciousness of at least the younger groups of our profession. Yet in actual practice this conception, if recognizable at all under a thick layer of mannerisms, often takes the form of undue emphasis on some peculiarity of the client's requirements with the consequence that the house becomes capricious and essentially frivolous. There is no need to be too pedantic about it but one should recognize that this tendency to design a house as if it were an orthopedic shoe—useless on another man's foot—ignores the fact that a functional house should function properly both in time and in space. Its usefulness should be extended for as long as possible and should have as broad a social base as possible. The business of building a house involves, in my way of thinking, the assumption of a definite obligation toward the community by both owner and architect. It is hardly logical to preach the tearing down of houses before they become obsolete and keep on designing houses which carry the germ of their own premature obsolescence. The question of speeding up the turnover of residential building is a tricky, technical, legal, and economic problem. An individual architect can do very little about it. But the same architect can do a great deal in his everyday work to increase the usefulness of his houses. First of all, he can emphasize those requirements of the family in question which are in harmony with today's ways of living and, insofar as it is possible, with tomorrow's trends—this will broaden the social usefulness of the house. Second, he can endow his houses with a far greater degree of flexibility than they now possess. There are two kinds of flexibility: the flexibility in the use of an existing house and the ease of alterations. By the separation of the servants' quarters from the main house and by the choice of a skeleton type of construction, I tried to incorporate both kinds of flexibility in the design of our house.

In conclusion, a few words dealing with another aspect of construction. I am appreciably older than the majority of modern American architects. I completed my formal training in the middle twenties. In some respects it was not the best time to complete one's education (I tried to correct this by returning to the status of a student over and over again) but it had one distinct advantage: I was able to acquire a great deal of practical experience before the crash came. It is fashionable now, among the younger sets, to speak sneeringly of the state of the profession in those remote days. Bad as it may have been in many respects, it had one quality which is in danger of being lost: I think that at least the leading American offices in the decade of prosperity established standards of quality of construction and of thoroughness of preparation of drawings and specifications which, as a whole, have not been equalled anywhere in the world and approached only in England.

I sincerely admire the daring, resourcefulness and sometimes downright talent of many a young architect; but frankly, as often as not, I am appalled by the low quality of construction. Sometimes this lack of quality is excused by the experimental character of the building,

"The house stands on two or three fairly level acres between the orchard and valley . . ."





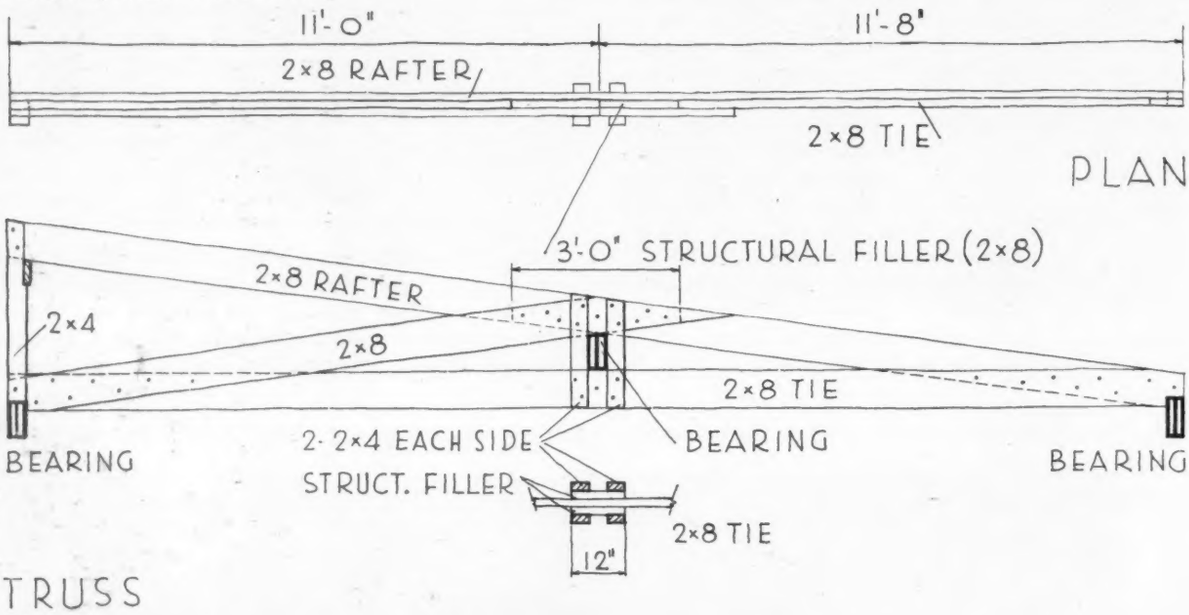
Service wing living room, looking through to the kitchen

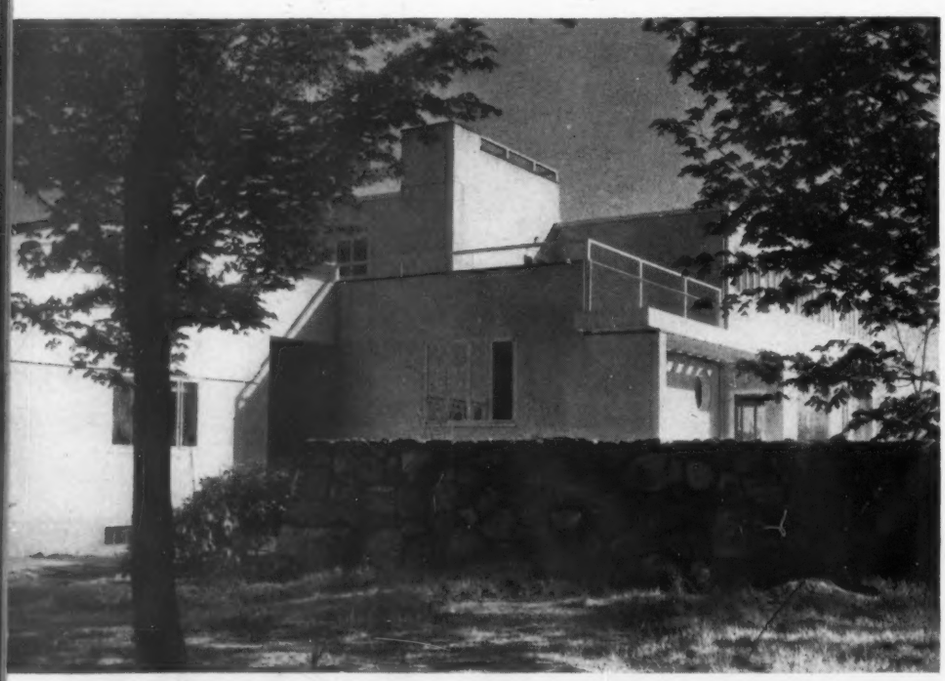
but sometimes it is obvious that the young man in question did not know any better.

Quality of construction is not a luxury. A certain minimum, not very low at that, is an economic necessity in any type of a house if one analyzes properly the upkeep charges. This minimum can be dispensed with only in temporary shelters. Quality of construction is not synonymous with expensive materials and methods of construction. In fact, a high degree of quality is much easier to achieve if the type of construction is simple and straightforward and if a wide selection of materials is readily available. Neither is the quality of construction necessarily limited to buildings of conservative type. The thorough and detailed study which should be a prerequisite of any worth while experiment will inevitably result (if the experiment is successful) in a high degree of quality. In fact, the lack of sufficient quality will necessarily destroy the value of the experiment.

The understanding of quality of construction and the uncompromising insistence on a suitable degree of it belong (to my way of thinking) to the very essence of an architectural mind.

Detail of truss in service wing





An open, covered passage separates the house and service wing

Photos by Ernest Graham

Total Cure for a Sorry Case

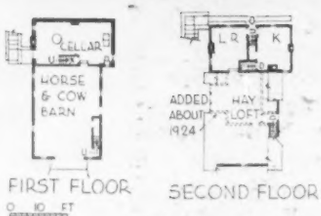
Cleveland, Ohio

BASCOM LITTLE, ARCHITECT

"Something old and something new" might constitute the theme song for the wholesale remodeling and extension treatment that was given to this old house, original photographs of which appear on the following two pages. The place is the architect's own home and office. As Mr. Little puts it: "The problem was to obtain the advantages of contemporary planning ideas and still retain all of the old structure. Where large areas of glass were not required—on the north elevation, for example—it was found sensible to use the old window frames; whereas on the south (photo above) with its sun, view of the woods, and best breezes, a whole wall of glass was used. The only concessions to traditionalism are the shutters, which were used to improve the proportion of existing window frames."

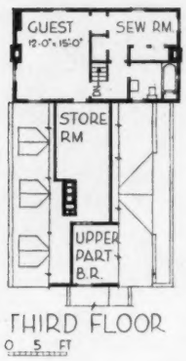
The resultant house is something of a stylistic Mulligan stew, but as in a well-brewed stew, the disparate elements have been intelligently blended to form a satisfying whole.

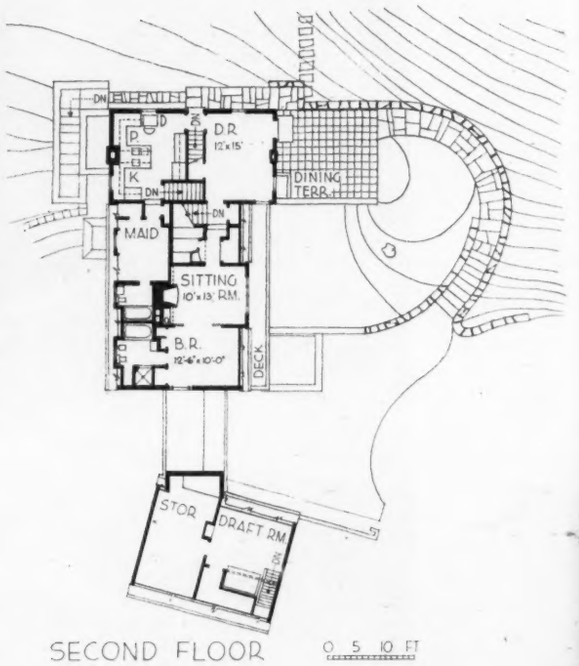
Motor court entrance. The house walls are painted red; trim and shutters are white

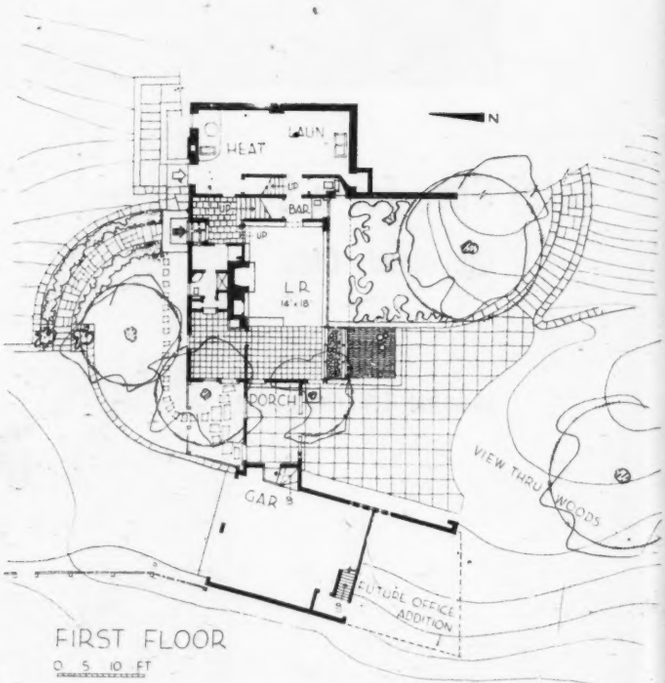


Before

BASCOM LITTLE, ARCHITECT







This house is a good example of the usual form of war on architectural obsolescence—application of a vigorous cure to a structure otherwise nominated for oblivion. The architect inherited the steep, wooded hillside property, located near the border between Cleveland proper and Cleveland Heights. The site is large—some 3¾ acres, with a 600-foot frontage—with the existing house placed well toward the rear of the property. Since it has as near neighbors Western Reserve University and the University Hospitals, development along the frontage is a promising future possibility; it therefore seemed a sound investment to reclaim the old house.

The existing 4-room house with attached barn and hayloft, built in 1888, was anything but promising. It is the more remarkable that in the finished job, as the "Before" and "After" snapshots clearly show, practically all of what existed structurally was maintained.

According to the architect, "the new part of the house (the garage and connecting porch) was carefully designed to gain privacy. The garage with its peaked roof shuts out a view of a busy street to the west from both first- and second-floor windows."

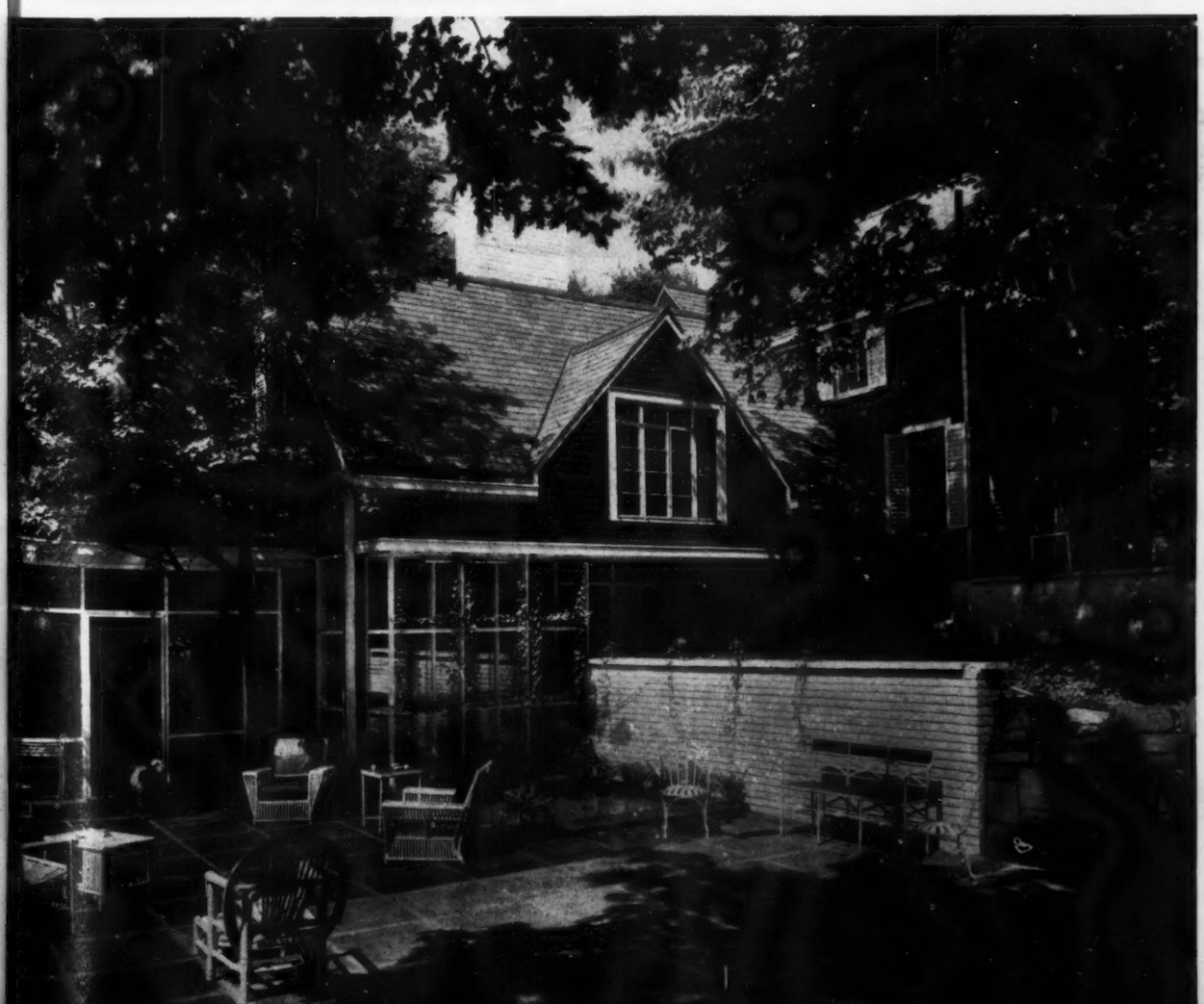
In detail, the floor plans appear unduly complicated and full of strange breaks, but we learn that this is "due to the need to accommodate a number of built-in features (such as dust-proof wardrobes) which were brought from another house."

Among other items to be accommodated was an unusual collection of antique furniture. Many home owners and architects, too, would have at once assumed that this condition required strict adherence to traditional settings. In this case, however, the sanctimonious approach was eschewed; clean wall planes without moldings were built, with the curious result, as Mr. Little points out, that "the antiques are actually considerably more effective than they were in the linenfold oak-paneled room for which originally bought."

At the time this job was done, various rejects from a nearby government housing project were available at low cost, and the architect took delight in using some of the unorthodox items from this source that could hardly have been anticipated by a specification author. Discarded plywood formwork was used for finish floors; 4″ x 4″ shoring from the same source became studding and rafters; exterior doors were also rejects from the housing project; the lintel over the living room fireplace is a piece of old blackboard; a junk shop provided the wash basin in the first-floor lavatory; stone for the retaining walls was obtained by intercepting a load of excavated material on the way to the city dump. This was acquired at the extremely reasonable cost of two bottles of beer for the truck driver.

Before

Southern hillside front. The living room window wall is shaded by an overhang calibrated to the angle of the sun



Living porch, showing use of discarded 4" x 4" shoring for framing members

BASCOM LITTLE, ARCHITECT

Bedroom

A twentieth century setting displays eighteenth century furniture to good advantage

ACT I.
The awkward old house, built in 1903

Frederick L. Confer, Architect

ACT II.
The "Colonial" period, 1936-1941

Remodeling Job in Three Acts, Berkeley, Calif.

Howard Moise, A. I. A., Architect for the Final Act

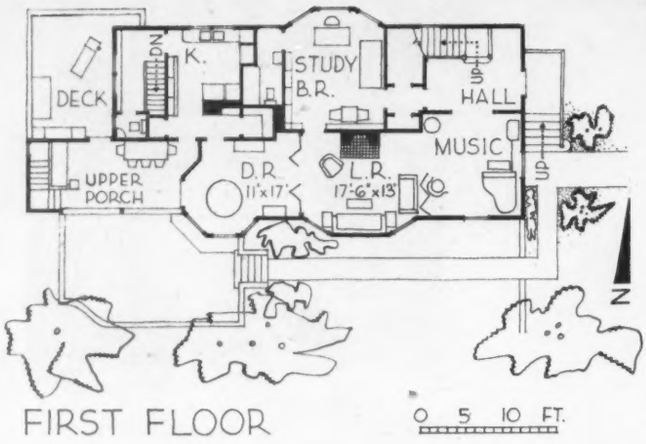
In 1941, this property passed to the hands of its third owner at a cost of $9,500—and thence to Mr. Moise for further alteration. Doctor's orders had forced the owner to look for a house with a downstairs bedroom and bath, not too brightly lighted, and he bought the house chiefly because it provided that feature. Furthermore, with the many changes made by its previous owner, it had become a pleasant, commodious, livable house in most respects. But there was one exception—a serious one: it had no provision for outdoor living; no porch, no garden, no contact with the outdoors except by way of the front door and the brick stoop. There was also a lack of functionally separated living or play

Before

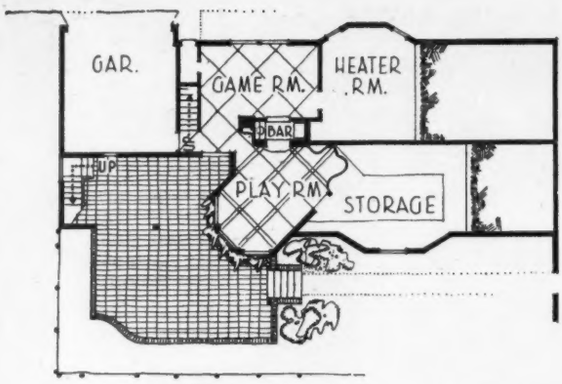
After

Photos (of new work) by Roger Sturtevant

ACT III. The present house, designed for better living



FIRST FLOOR 0 5 10 FT.



BASEMENT & GARDEN PLAN 0 5 10 FT

spaces for the different age groups of a family including parents, two children in college, and one of high school age.

The correction of these two faults and the creation of facilities whereby the owner's wife could indulge her predilection for gardening constituted the chief conditions which the architect for the second major remodeling operation had to meet.

Arrangement of furniture and folding screens breaks up the long living room into functionally separate areas.

The bamboo-pole surface on a portion of the playroom walls helps increase the room's apparent height.

Very little was done to the existing interior of the house except to paint the main rooms bone white (eliminating wallpaper), move some picture moldings, and carefully plan and supervise the furnishing. The owner's downstairs bedroom was lined with bookshelves and painted an "operating room" green for maximum eye comfort. But the chief improvement was provision of the badly-needed facilities for outdoor living.

In the space between the dining room and the rear lot line a generous porch or outdoor living room was constructed, wide open to the South sun but closed on the North and West against the chilly winds which blow in from San Francisco Bay. The bare back yard, which had previously served only to harbor a dog kennel and the garbage can, was converted into a brick-paved patio. A lower porch provided a shaded extension to the patio and increased its apparent size. A high screen of lattice and glass-like fabric converted the exposed garage roof into a sheltered, out-of-the-way work place and sun deck. Finally, the basement area under the dining room and kitchen was developed into a play room and game room, with a two-way bar, for the use of the younger members of the family.

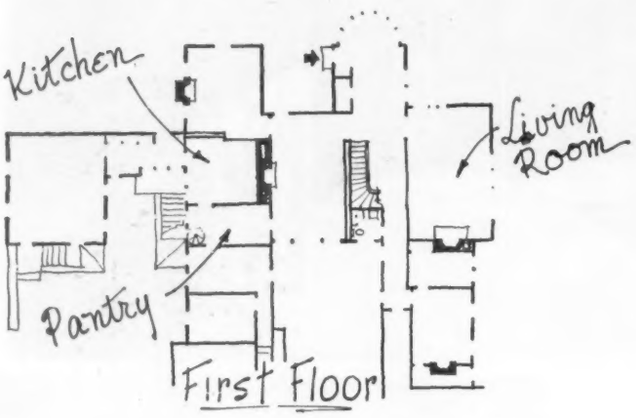
The creation of these two rooms and of the lower porch was achieved by taking advantage of favorable grade conditions. The main floor of the house was well above grade in the front, and the lot sloped several feet toward the rear. At the back of the house the underpinnings were high enough so that, by lowering the grade and foundations only about 18 inches, it was possible to insert an additional story under the main floor. The ceilings are low, but the effect is not unpleasant. Finally, attention should be called to the ingenious solution of the small but important problem of where to put the garbage can for a kitchen a story above ground and without access to the back yard. A garbage closet with an unlocked door on the street for the use of the garbage man, and a trap door, equipped with a foot-operated cover, in the floor of the service porch do the trick.

The cost of the improvements and the total investment which the house in its present form represents (exclusive of architect's fee and cost of landscaping) was $7,028. The landscaping cost came to approximately $272, the architect's fee, $700, or an over-all total of about $8,000. Of the $9,500 paid for the house, $2,000 may be considered as the value of the land. Adding the remaining $7,500 to the $8,000 expended for alteration brings the total cost of the house itself to $15,500. Is this too much to spend for a remodeled house? The answer would seem to be that a new house of similar construction and equipment and of equal floor area, figured at the rate of $6 per square foot (the figure in general use for estimates at the time of the latest remodeling), would have cost at least $25,000.

Walls of 10-in. redwood siding, treated with one coat of oil-thinned pink paint wiped off, shield the upper porch from the prevailing—and sometimes disagreeable—winds. The ceiling is pink-painted plywood. White trim frames the view of garden and patio.

The patio paving brick, laid on 2-in. cement grout, with vertical joints sand-filled, is continued to form the flooring for the lower porch or loggia. The stairway provides an agreeable connecting link between the main floor of the house and the garden level.

Exterior view of the house



An Oldtimer Undergoes Surgery

Prides Crossing, Massachusetts

LOUISA VAUGHAN, ARCHITECT

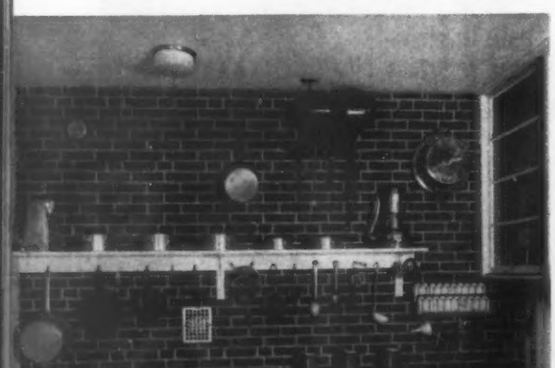
This veritable ark of a house had been in the architect's family for many years, accumulating wings and oddments as it rocked along. One particularly plush period had even seen the addition of a grand ballroom! Long since, the place had passed beyond the confines of any definitive unit, and under ordinary circumstances might have been considered hopeless today. But there the house was, and as the war produced its full measure of family readjustments, it became desirable for various segments of the family to find a suitable place in which to "carry on." The result was the partial rejuvenation of the old place.

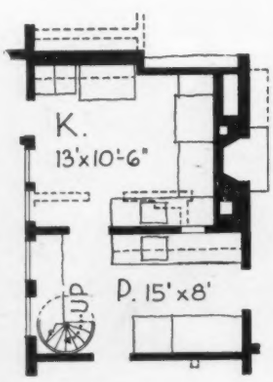
No claim is made that what has been done is a model for others to follow, and certainly the over-all house still remains a bulky and unlikely dwelling for any average family. Even to the owners, the remodeling is frankly a temporary expedient, and in most of the work the least elaborate of materials—composition board, sheets of plywood, etc.—have been employed.

Nonetheless, the renaissance that has been brought to the individual rooms is instructive to any architect commissioned to improve existing facilities in an old house; for while the house as a whole is exotic, the separate rooms are not untypical. And the architect, in addition to achieving the results with modest materials, has so organized them that the rooms constitute contemporary design of a high order.

As in many elderly great houses, the old kitchen was located at a considerable distance from the dining room, and communication with the family part of the house involved a good hike. By bringing the kitchen and pantry together in an efficient unit immediately adjacent to the dining room and including a spiral staircase from

Kitchen (left) and pantry (right); spiral stairs lead to the upstairs hall



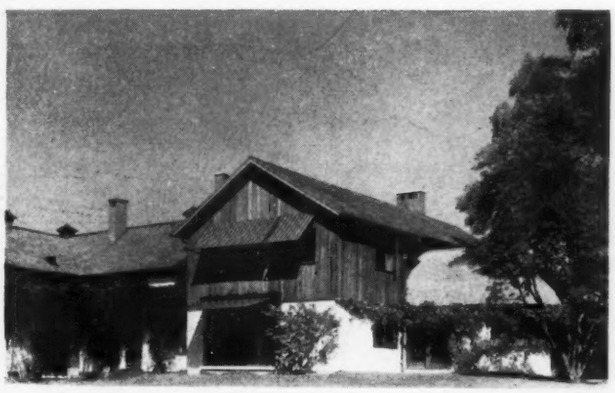


KITCHEN & PANTRY

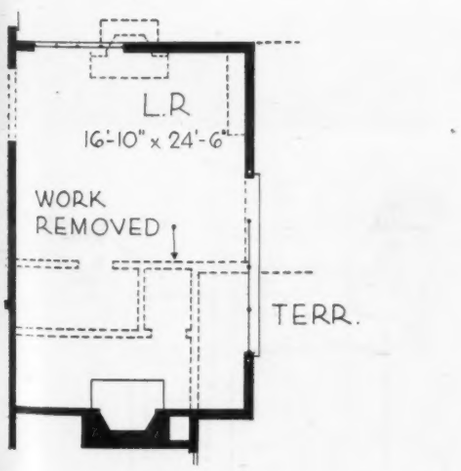
0 5 FT

Photos by Cushing-Gellatly

The remodeled living room: walls of smooth white plaster; ceiling, sand-float finish in light gray blue; fireplace, travertine of a pink-beige tone.



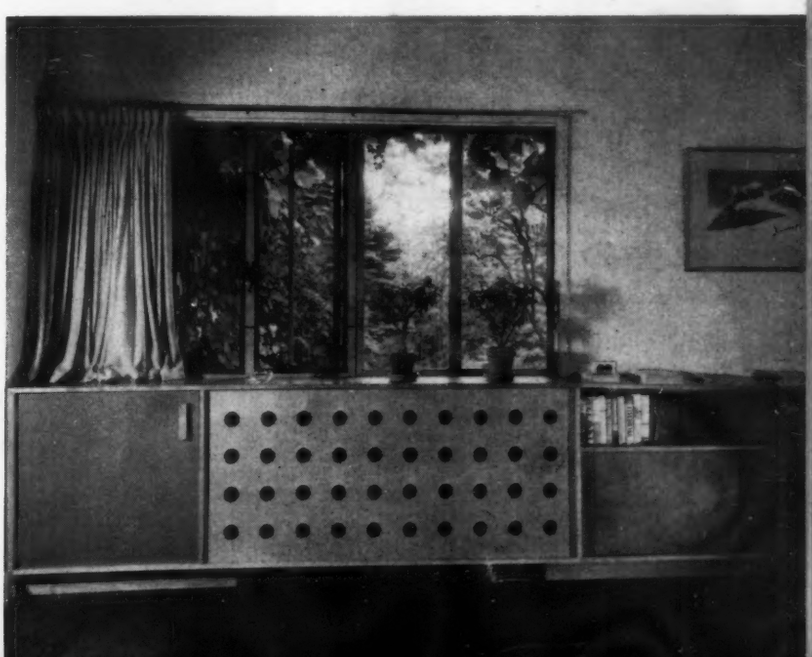
Exterior, showing window wall of the remodeled living room

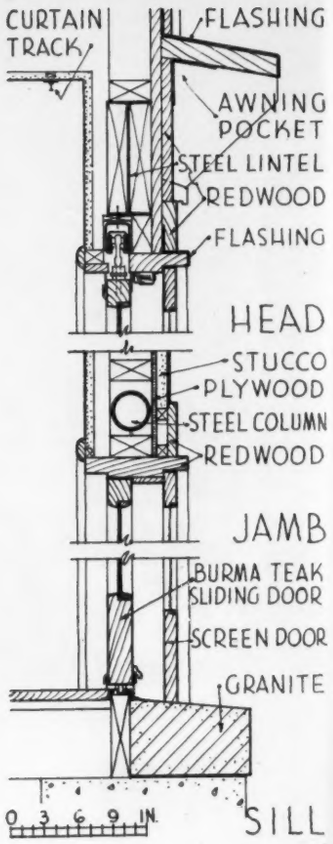


LIVING RM.

0 5 FT.

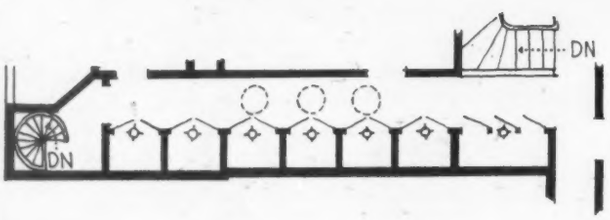
Storage cabinets and radiator screen are built of hard composition board and natural birch plywood





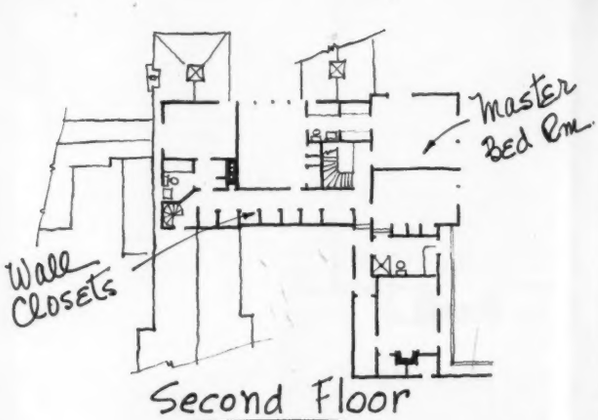
Glazed panels, hinged to fold back, make up the huge view window in the living room

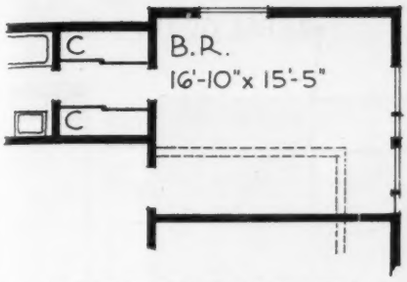
Closet wall of the upper hall; details and photos below



HALL WALL CLOSETS

0 5 10 FT.



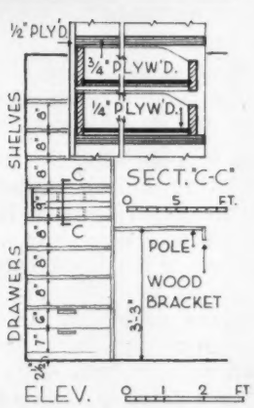


MASTER BED RM.
& DRESSING CLO.

0 5 FT.

New sash and a new color scheme have enlivened this bedroom. Three of the walls are pale pink smooth plaster; the fourth, behind the beds, is painted dove gray. The curtains are natural basket weave fabric with a printed leaf pattern in gray and dark green.

The new subdivided closet in the dressing room is equipped with sliding doors.

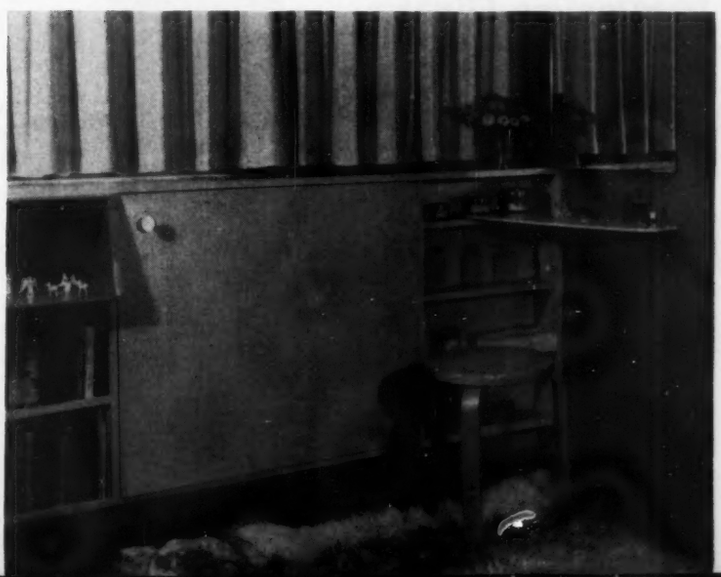


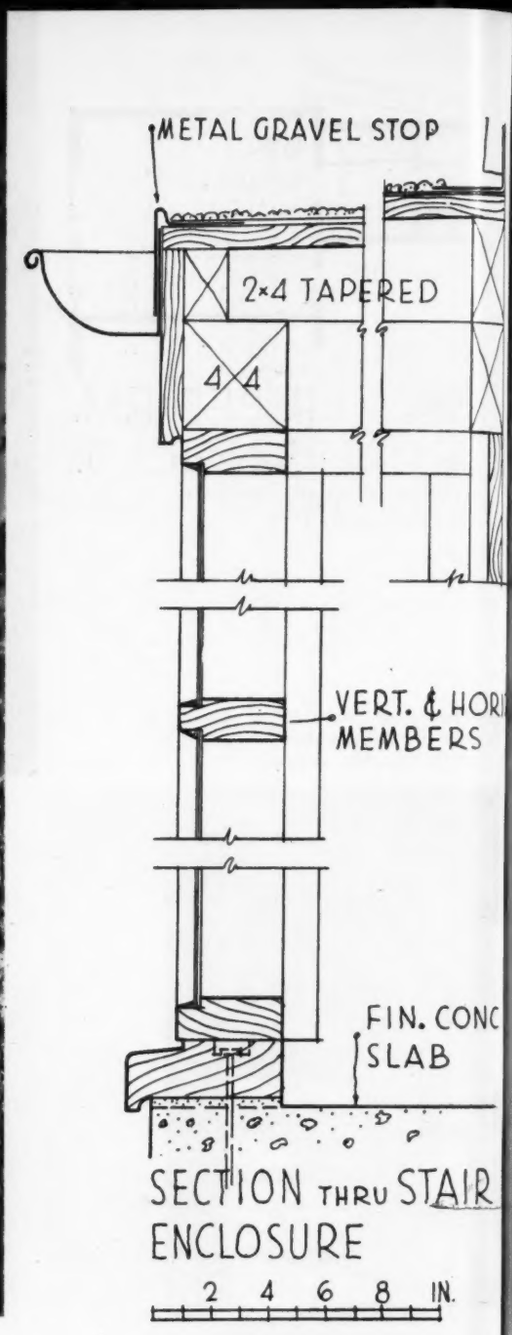
DET. OF CLOSET

the pantry to one end of the upstairs hall, innumerable unnecessary steps have been eliminated. Organization of the new culinary department is along the efficient lines of the most up-to-date kitchens. And the spirit of the rooms has been raised with a bright color scheme of red and white. Walls and cabinet work have a white gloss-painted finish; cabinet interiors are left natural fir plywood; a washable, hard-surfaced tile covers the wall areas between the underside of cabinets and counter tops; work surfaces are either stainless steel or red linoleum. The floor is covered with gray marbleized linoleum, and the curtains are a red cotton plaid.

The upstairs hall closet wall (following page) is worked out for efficient and central organization for the belongings of various members of the household; the central, under-window cabinet is painted cream color; the other closet surfaces are painted rose red; the floor is wine-red linoleum.

The enclosure for a bedroom radiator has been extended to form shelves and a small dressing table unit.





Photos by Roger Sturtevant

Imaginative Flight From House to Garden

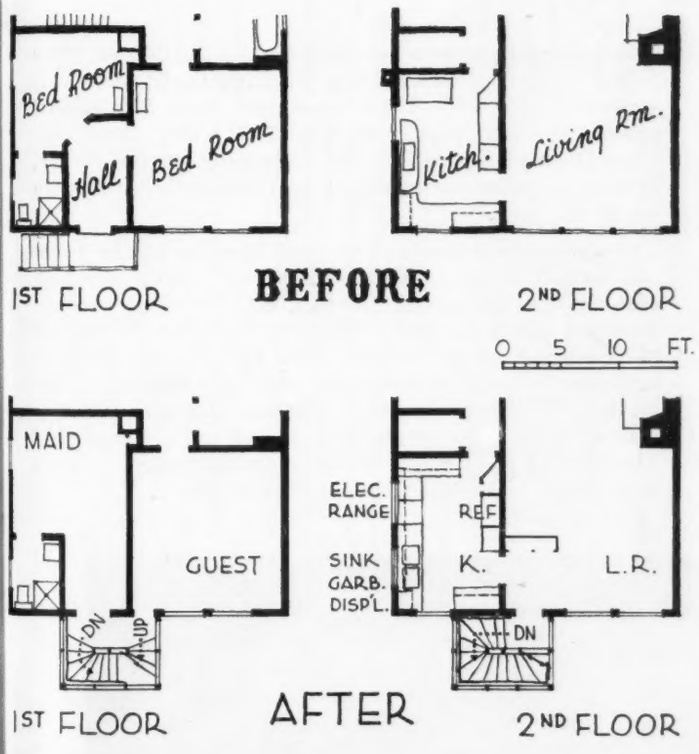
Berkeley, California

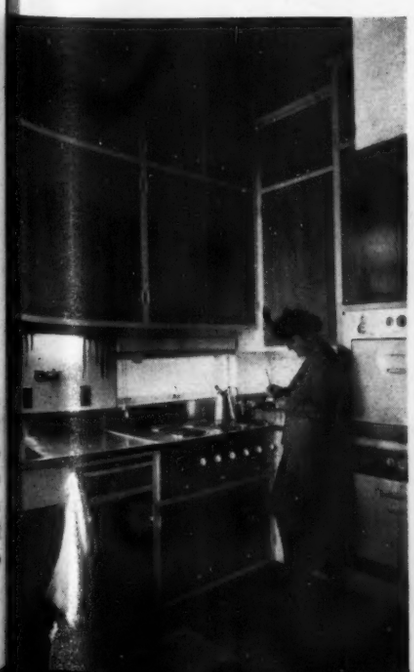
WILLIAM WILSON WURSTER, A.I.A., ARCHITECT

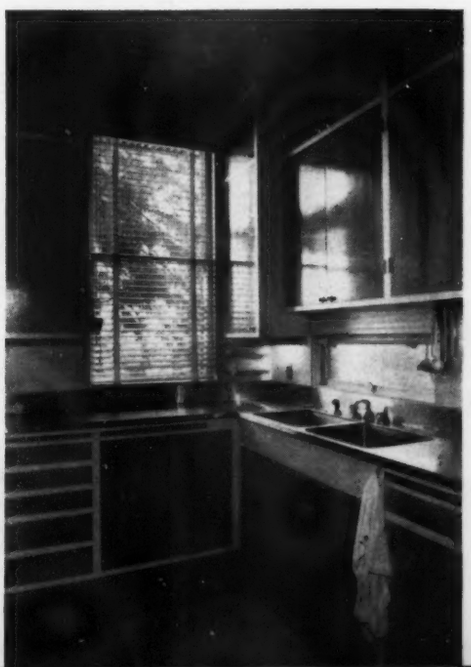
From the viewpoint of an owner whose chief delights are gardening and cooking, this high-waisted house had two abysmal flaws: there was no way to approach the garden from the house except by an ungainly little kitchen stoop with steep, ladder-like stairs; and the kitchen was poorly arranged and ill-equipped, was altogether inefficient and unpleasant.

Through the architect's good offices, both of these "essentials" have not only been provided, but dramatized in a most exceptional way. The new kitchen might well impress Oscar of the Waldorf, and the new backstairs achieve the combined aspect of a shaft of light, a tower of glass, and an articulated spiral eyrie.

It is important to note that by appending the stairs outside the existing building wall, interior cutting, patching, and the general confusion usually involved in the introduction of a new stair were almost entirely avoided. In effect, this single extraordinary element provides three floors of the house with a wholly new hallway and means of circulation. Where, before, a trip to the garden meant the equivalent of a visit to the garbage can or a devious route to lower levels via private rooms, new doors now open from each level, and the approach to the garden becomes an experience not to be duplicated for miles around—if anywhere.



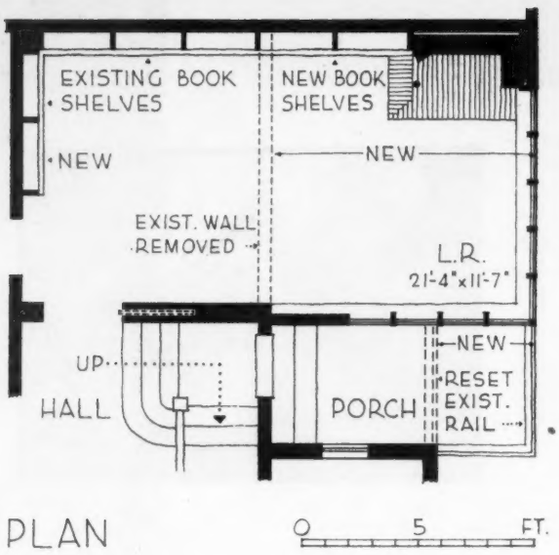




The kitchen (photos at left) where meals have been prepared for as many as 54 dinner guests and where, at Christmas time, the owner turns out 4,000 cookies for lucky friends, is regally outfitted with a series of built-in electric units comprising oven, broiler, and warming cabinet, counter tops of stainless steel with shallow steel sash above, and a splendid array of cupboards and shelf cabinets with a place for everything. The silver drawers are made with fitted covers so that when the owner is away, the drawers become strapped boxes exactly sized for storage at the bank.

Photos by Roger Sturtevant

On the exterior, no attempt was made to do more than match surface treatment with existing work: natural shingles, green-painted trim.



One-Room Improvement

Berkeley, California

HOWARD MOISE, A.I.A., ARCHITECT

The original room was too small and poorly lighted. The "view" from two double-hung windows on the east was a close-up of a wall of the house next door. The stilted ceiling of coved plaster was at 9'-6". The owner, retired Dean of Women of the University of California, desired a more commodious and attractive room in which to work.

The alteration more than doubled the size of the room and bookshelf space. To shield the old "view," the new easterly windows are of ribbed glass; the new southern windows admit abundant sunlight and allow a glimpse of front garden and street. Two sections of the steel sash are hinged to open and are provided with roll screens. For the Berkeley climate, the architect explains, "This is as much fresh air as one ever wants." The end tier of bricks of the open-end fireplace is turned at an angle to protect adjacent woodwork.

Walls and cupboard doors are of waxed redwood plywood; ceiling: plaster board, painted pink. The upholstery is oyster white, and the rug repeats warm tones found in the fireplace brick.

FLOORING, Plastic Magnesium Oxychloride, Cont.

INSTALLATION IN GENERAL—In the past it has been the custom of some installers to use thicknesses of ½" or less in some cases and also to place flooring in two coats. The present trend is to apply flooring in one coat to a thickness of ⅝" over-all. Where floors of 1" or more in thickness are required for increased fire resistance, to meet grade, for greater impact strength under severe service, or for some other reason, two coats may be used with the finish surface coat *not less than* ½".

The material is furnished to the site in two parts. The first consists of magnesium oxide, aggregates, colors and fillers which have been proportioned and dry-premixed by the installer. The second is magnesium chloride which is furnished in flake form and is reduced to a liquid on the job by the addition of water to the required specific gravity. These are combined to a mortar which is spread on the job, leveled and finished by troweling or grinding.

Flooring can be laid over sub-floors of steel, wood or concrete. Cove bases can be laid against wood, hard cement plaster, brick, concrete or stone but should not be laid against glazed brick, gypsum tile or lime plaster.

Fairly even room temperature must be maintained. In cold weather a 65° to 70° temperature should be maintained day and night for 48 hours. A sudden drop of 15° or more may cause cracking by shrinkage. A sudden rise in temperature can cause buckling by expansion. Within 24 hours after the final troweling any roughness can be smoothed by dry rubbing with steel wool. Floors are then given a light coat of wax or a mixture of boiled linseed oil and turpentine or benzene, well rubbed in. New floors should be protected for 72 hours with sawdust or building paper.

Pipes passing through magnesite floors should be surrounded by metal sleeves 1" greater in diameter than the pipes. Brass, aluminum or steel sleeves should receive a protective layer of asphalt paint or shellac.

WOOD SUB-FLOORS—The wood must be clean, sound, and firmly nailed. Painted or galvanized expanded metal lath or 1" wire mesh galvanized after weaving is nailed 6" both ways over good quality waterproof building paper.

CONCRETE SUB-FLOORS—The concrete must be sound, dry and not less than 30 days old. The surface should be short-tooth raked, broomed or picked. No wooden sleepers should occur. No lime fattener should be used in the concrete. Concrete on fill should be waterproofed.

STEEL SUB-FLOORS—Steel must be clean. The plates may be preformed to provide a key for the magnesite flooring or a metal mesh should be bolted or spot welded over the entire surface. Various types of bituminous coats, paints and enamels are used over the steel plate and anchoring mesh before the oxychloride cement is installed.

TYPES OF FLOORING — Unlike some building materials, specifications and performance tests for oxychloride cement have not been completely codified and standardized for the various applications. Therefore, contractors should be selected on the basis of established reputation, numerous references as to service, ability, honest and financial responsibility, as well as a willingness to bond or guarantee the performance of the installation for a given period.

A wide latitude in properties of the flooring is possible through the control of the ingredients. When a flooring possessing certain qualities is desired, it is essential that the contractor be allowed to use the combination of ingredients that will produce the stated physical properties. Magnesium oxychloride floors can be grouped into 8 basic types as follows:

1. **GENERAL PURPOSE TYPE**—No coarse aggregates are used. This type may be installed in solid colors, pigmented to match flat paint shades and they may have contrasting colors, designs, borders and base.

Physical characteristics make the general purpose type suitable for school rooms, hospital rooms and wards, ships, corridors and lobbies other than those subjected to extremely heavy traffic conditions, light industrial plants, retail stores and shops. Flooring is finished by troweling.

2. **HEAVY DUTY TYPE**—Coarser aggregates are used and a smaller amount of filler than Type 1. Type 2 will meet more severe service conditions such as institutional and restaurant kitchens, intermediate industrial plants, corridors, lobbies and business establishments having hard usage. Finished same as Type 1.

3. **NON-SPARKING AND STATIC DISCHARGING TYPE**—There must be no silicious aggregate in this type. The flooring should be laid over a mat formed by lacing bare No. 14 copper wire 12" o/c both ways. The ends of these wires are soldered to a No. 8 copper wire which is grounded.

This type of floor prevents either mechanical or static sparking. Non-sparking floors are used in operating rooms, dope or paint pray shops, ammunition plants, or wherever explosions, flashes or fire present a hazard. Finish is by troweling or grinding.

4. **NON-SLIP ABRASIVE TYPE**—Abrasive aggregate may be either sprinkled and troweled into the finish surface or may be used as an integral aggregate to form a highly non-slip surface suitable for stair treads, ramps, elevator floors, etc. This type may be pigmented but is usually installed in a black color. Finish is by rubbing.

5. **TERRAZZO TYPE**—Marble chips, colored stone and pigment provide a practically unlimited range of color combinations. Division strips of brass, white metal, hard rubber or plastic may be used but aluminum strips are not suitable. Strips are not necessary for division into small units but are used only for the segregation of colors, the creation of design patterns or for localizing cracks over anticipated lines of structural stress. The floor is finished by grinding.

6. **INDUSTRIAL TYPE**—Crushed granite or trap rock chips are incorporated to create an extremely durable floor comparable to granite. It is installed with a power float of the vibrating type, hard troweled and lightly ground.

Another variety of industrial floor for the most severe use is formed by the installation of a Type 2 bedding, a cast iron or steel grid filled with Type 2 cement, and finished with steel wool.

7. **CORK TERRAZZO TYPE**—An extremely resilient and quiet floor is obtained by using ⅛" granulated cork. This type is suitable for libraries, hospital wards and corridors, apartment house corridors, schools and in front of work benches in industrial work. Finish is by grinding.

8. **UNDERBED TYPE**—This is an uncolored fibrous base coat material for leveling uneven sub-floors prior to surfacing with rubber tile, asphalt tile, linoleum or ½" magnesite finish.

COSTS—Much 1-course magnesite flooring of Types 1 and 7 is laid near manufacturing points in the ordinary ⅜" thickness at 25¢ to 30¢ a square foot. Costs increase with the inclusion of special ingredients, smallness of the installation, the remoteness from the installer's place of business, the use of more than one color, etc.

TESTS—The Bureau of Standards have published the results of comparative tests on many types of flooring for slipperiness and wearing quality. Since the published results do not indicate the mixes of magnesite used they become useless for comparative purposes.

The Dow Chemical Company and others have proposed methods of test for the magnesium chloride and the magnesium oxide to measure strength, volume change and spark-proofness.

REFERENCES—A.I.A. material filed under Index No. 24A.

"Plastic Calcined Magnesium Oxide and Magnesium Chloride Cements," article published by Chemical and Metallurgical Engineering, August 10, 1921. Shows results of physical tests on cements.

"Magnesium Oxychloride Cements—Their Properties and Uses in the Construction Field," by M. Y. Seaton, paper. Richmond Meeting, December 6, 1922, American Institute of Chemical Engineers. This is a very good article.

"Development and Use of Canadian Plastic Magnesia," by A. F. Gill, National Research Council, Ottawa, Canada. Article published in Canadian Chemistry and Metallurgy, October, 1933. This is one of the most interesting articles that has been written. Treats the matter of sawdust and their results with practical tests and resiliency.

"An Investigation of Composition Flooring," by R. R. Shively—work done under Industrial Fellowship No. 2, Mellon Institute of Industrial Research, University of Pittsburgh. Article published in Engineering and Contracting, September 27, 1916.

"Composition Flooring and Floorlaying," by A. W. Comber, F.I.C. Assoc. Inst. M. M. A book published by Charles Griffin and Company, Ltd., 42 Drury Lane W.C.2, 1936. (British practice differs considerably from American.)

TRADE ASSOCIATION — On July 1, 1944, the Oxychloride Cement Association was formed, with offices at 1010 Vermont Avenue, North West, Washington 5, D. C., representing the Dow Chemical Company, F. E. Schundler & Co., and the Westvaco Chlorine Products Corporation, with C. Huddleston Bear as Association secretary.

FLOORING, Plastic Magnesium Oxychloride

DESCRIPTION—Plastic magnesium oxychloride cement is known variously as composition, sorel cement, magnesia cement, plastic magnesia cement, magnesite, and by various trade names which may or may not suggest the ingredients or appearance of the finished floor.

These floors may be laid over old or new floors and sub-bases. Bases, wainscots, and carpet strips can be formed of the same material. Plastic magnesium oxychloride floors are permanent, warm, quiet, resilient, dustproof, relatively non-slip, incombustible, inhibiting to bacteria and fungus, and have good wearing qualities. A wide range of exceptionally clear, brilliant colors is available to the designer.

Because of the inherent resilience of magnesium oxychloride floors it may be applied monolithically to areas of large extent without cracking, provided there is no excessive structural movement. This property has led to its widespread use in ships, street railway cars, railway cars and subway cars, where the vibration and racking imposes serious demands.

Aggregates may be incorporated to form terrazzo. Metal or plastic strips may be used for design purposes. Ingredients may be controlled to produce a floor which will not spark from friction or static. Floors are sometimes scored to represent tiles or blocks with the dubious idea that such grooving of an inherently sanitary monolithic surface will improve either its function or its appearance!

COMPOSITION IN GENERAL—The plastic cement is made by adding about a 22° Baumé solution of magnesium chloride hexahydrate termed magnesium chloride ($MgCl_2+6H_2O$), to magnesium oxide (MgO) which is a fine white powder. Magnesium oxide is also referred to as calcined magnesia and calcined caustic magnesia. The resulting plastic paste is magnesium oxychloride (approx. $3\ MgO+MgCl_2+11H_2O$).

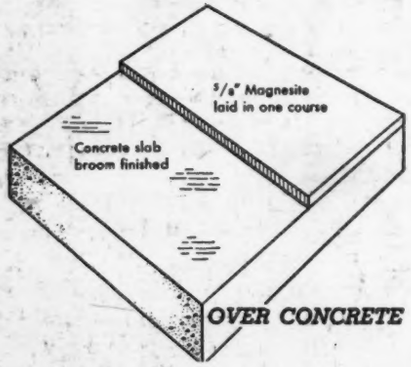
Fillers such as wood flour, hardwood fiber, cork, talc, asbestos, sand, silex, marble flour, limestone fines, as well as color pigments and aggregates if desired, are mixed into this paste. The paste sets to a hard mass comparable to Portland cement in strength. After setting the cement takes a high wax polish.

RESISTANCE TO LIQUIDS, ETC.—The floor is attacked by caustics and sulphuric acid but not by ordinary chemicals in the concentrations which would usually be encountered. Alcohol, grease, naphtha and other solvents do not attack this flooring.

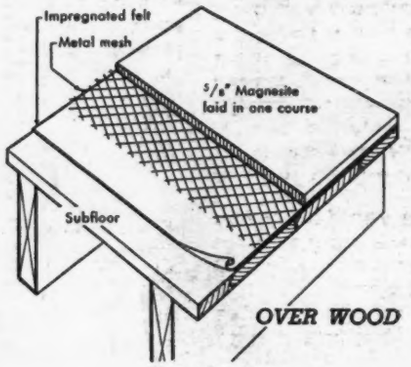
Magnesium oxychloride flooring is not waterproof in that it will not withstand complete immersion over a long period or constant dampness. However, experience in public transit cars as well as in many industrial and other building installations indicates that under normal conditions in dry locations the floors will withstand any wetting incidental to use or maintenance without affecting the normal life expectancy of the installation.

The choice of fillers, aggregates, and the grading of aggregates affect the solubility and absorption of the flooring. It has been found that the addition of copper powder in compositions that contain no fillers which are in themselves affected by water, will reduce the solubility of the flooring. The use of copper powder is a proprietary process owned by one company.

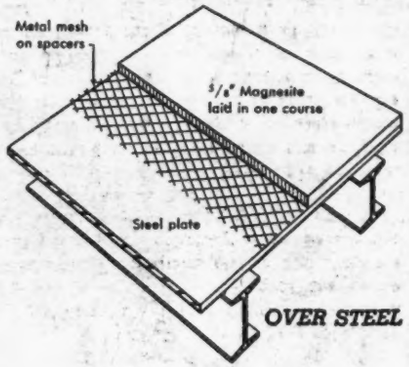
Washing soda and water, especially scalding water, will ordinarily attack almost any finish flooring whether it be linoleum, wood, terrazzo or even marble—depending on the strength of the solution. Magnesium chloride is a salt and is water soluble even after it is crystallized in the solid flooring. While ordinarily, even daily mopping of floor is not harmful to it, constant water without intermittent periods for drying and recovery of the salt is harmful. Therefore, magnesite flooring is not recommended for unprotected sub-grade or exterior work.



OVER CONCRETE



OVER WOOD



OVER STEEL

SOURCES OF SUPPLY—The omission of any installer from this list emphatically is not to be construed as an indication that the omission is because his product lacks merit.

Acme Asbestos Flooring Co., 218 N. Elizabeth, Chicago
Asbestolith Mfg. Co., 175 Fifth Avenue, New York
Diato Flooring Co., 1135 N. Mansfield Avenue, Los Angeles
Donaldson Floor Co., Rockford, Ill.
Hackmeister, Inc., 2332 Forbes Street, Pittsburgh
Hill Bros. Chemical Co., 2159 Bay Street, Los Angeles
Kompolite Co., 115 Clay Street, Brooklyn, N. Y.
Marbelette Floor Co., 228 LaSalle Street, Chicago
LeRoy Olson Co., 3070 72nd Street, San Francisco
Rascolith Flooring Co., 5618 Corson Avenue, Seattle, Wash.
H. H. Robertson Co., Farmers Bank Bldg., Pittsburgh
Selby, Battersby & Co., 33rd and Arch, Philadelphia
Tuco Products Corp., 30 Church Street, New York
Whittington & Brown, 600 F Street, Washington, D. C.

LOCAL SERVICE — Fill in the blank spaces provided below with the names of manufacturers' local representatives who can help in problems involving this product.

Product _____
Local Agency _____
Representative _____
Address _____
Telephone _____

Product _____
Local Agency _____
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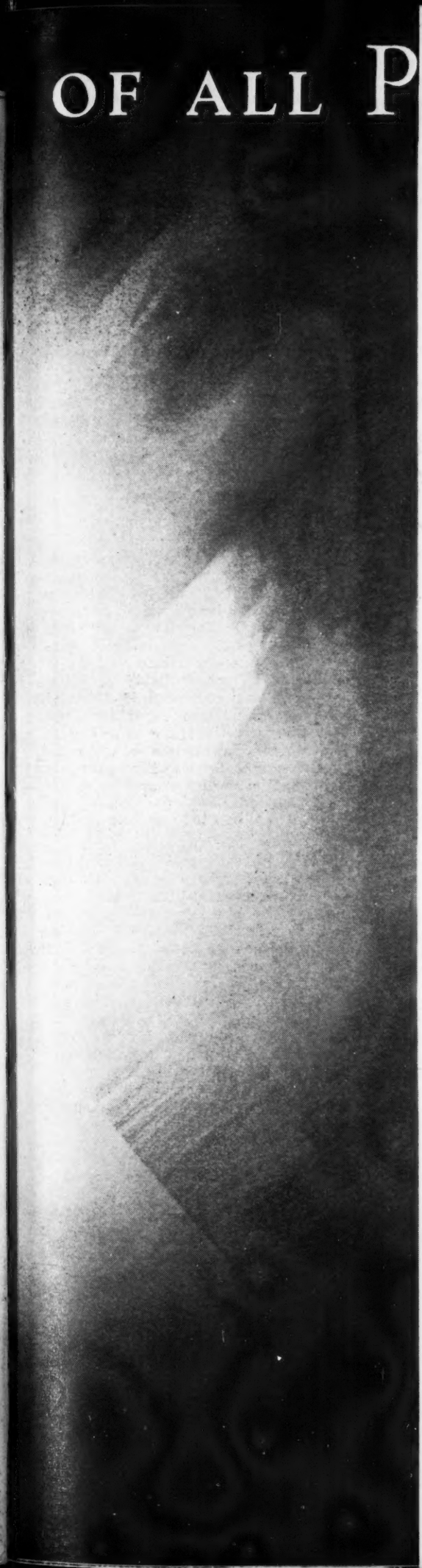
These data represent accepted practice in manufacture but do not necessarily mean that such products are currently available for civilian use.

OF ALL PROGRESS...



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by Rita Davidson and William Smull

"FOR THE PEOPLE OF THE UNITED STATES"

TVA — Democracy on the March. David E. Lilienthal. Harper and Brothers, New York, 1944. 248 pages, $2.50.

It is significant that when TVA, a public agency, actually executed its own blueprints it scotched the word "planning." Instead, it described its work as the achievement of unity of resource development at the grass-roots level. (That sounds like hard going; actually, this book is very readable, almost "popular.") Similarly, the Planning Department, instead of being a staff organ for the ivory tower dwellers, fanned out to include the activities of the entire organization. The most striking departure from orthodox planning practice was the refusal of the Tennessee Valley Authority to freeze its aims into a master plan. "Not one goal, but a direction. Not one plan, once and for all, but *the conscious selection by the people of successive plans.*" The tools of the trade had indeed evolved into a basic philosophy.

The TVA's contribution to planning experience should be measured in more than the technical sense, for it shattered the dichotomous concept that plans should be manufactured in one agency and executed in another. The organization's success should be a portent to legislators who would construct future National Resources Planning Boards as isolated islands for thought. To channel resources to effect material and spiritual progress requires coordination of action with direction.

The faith of TVA's chairman in an individual's ability to work with his neighbors and governments to harness technology into a genie for good is heartening. The Ruskin-like fear of the machine and of mass-production methods is vitiated by the economic and social freedom which science has brought to the Tennessee River Valley. An efficient democracy inhabited by four and a half million persons, equal in area to England and Scotland combined and embracing seven states, has resulted from treating the resources of the watershed as a whole. The respect for the interrelationships between electricity and industry, industry and farming, farming and soil building, and soil building and flood control has enriched not only the area but the entire nation.

The TVA rests on three principles: a federal autonomous agency with authority to make its decisions in the region; responsibility to deal with its resources as a unified whole; and a policy of working in cooperation with state and local agencies and the region's inhabitants and their organizations.

Autonomy made possible the first regional approach to the problems of a river valley in this country. The usual political and administrative buckpassing was side-stepped by the device of resting complete responsibility for all phases of the program in one agency. Since "it was not conceded that at the hour of Creation the Lord had divided and classified natural resources to conform to the organization chart of the federal government," problems could be treated in relation to their natural setting and accountability could be fixed.

The treatment of resources in the light of their mutual inter-dependence staved off the possibility of dissipation of some resources at the expense of the current favorite, this usually being the practice in damming water to produce electric power. Flood control, irrigation, reforestation, and land reclamation, in addition to the production of electric power, made for valley rehabilitation in terms broader than physical.

Success here in separating decentralized authority indicates that bigness need not be a curse if values are continually reduced to human scale. The Valley's method of dynamic decentralization is best illustrated by its electric power program. Only power transmission and generation are centralized; distribution is handled locally by public or private systems. Fear of centralization has kept the program in the Valley and eliminated directives by remote control. The unit of administration, the watershed, has been limited to manageable proportions. Top responsibility has been conceived in terms of planning, leadership, stimulus, and guidance; and the citizens have been educated to their stake and privileges in the undertaking. The use of the demonstration method is well borne out by the demonstration farm, the encouragement of private enterprise to realize its own individuality in the expression of the common good, and the deliberate anonymity of the Authority, which are all expressions of the philosophy that explains that the "why" is as important as the actual doing.

A decade of achievement has convinced Mr. Lilienthal that the Valley's methods are sound. He envisions a future wherein men can preserve their representative institutions by relieving the pressure on overtaxed resources. His healthy disgust with the semanticists who pose insoluble choices between private enterprise and socialism, public bureaucracy and private monopoly, results from his talent for facing reality and ducking at labels. His statement that "a river has no nationality" is prescient of the place in international relations which the regional authority can occupy.

Mr. Lilienthal's vision is well founded. In Brazil the San Francisco valley's role has been forecast, and in America a vigorous campaign is being conducted for a multi-purpose development in the Missouri River valley.

In the light of Lilienthal's message, the current battle of the books between the Moses strategians and the unbarbered planners indicates the futility of words and the need of action. The appendix contains valuable references for technicians including some literature on architecture, regional development, and community planning in the Tennessee River Valley.

PRE-COLUMBIAN PLANNING

The Architectonic City in the Americas. Significant Forms, Origins, and Prospects. Hugo Leipziger, University of Texas, Austin. Feb. 1944. (Bureau of Engineering Research Series No. 39, Bureau of Municipal Research Studies No. 21) 110 pages, 40 plates.

The philosophical bases of modern architecture and rational city planning indicated by functionalism and cultural integrity are timeless. Good production in all ages has been inspired by these same ideals. Dr. Leipziger in this short book discusses the expression of these principles in pre-Columbian New World civilization. The book divides naturally into three sections; the first concerned primarily with Mayan, Aztec, Inca, and Toltec construction; the second with contemporary awareness of planning problems. The final section, composed of illustrations which are related to the text, provides visual evidence of the author's ability to correlate diffuse factors.

The discussion of pre-colonial work deteriorates too frequently into a catalog of place-names with little to hold them together. It is difficult to dissect out any thesis from the thumbnail descriptions of ruins in Latin America and brief references to European and pre-Christian influences. The second part of the book presents Dr. Leipziger's views more intelligibly. The significance of the pre-Columbian work to the south of us becomes clearer. The enthusiastic discourse provides an effective picture of an integrated plan based on broad concepts with its salutary effect upon the society concerned. He sees the problems of modern architecture and planning in a wide focus which comprehends the kinship of work in other civilizations and fields.

Gestalt psychology, with its insistence upon a completely integrated organism, provides some basis for the discussion. Systematic organization might have made this book a more lucid, and thus a more valuable, contribution to the literature of regional and community planning.

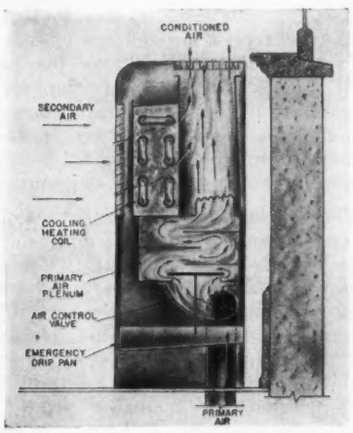
ONE STEP, AT LEAST

Plan for Public Recreational Areas, City Plan Commission, St. Louis, Missouri. Jan. 1944. 39 pages, 22 plates of maps and plans.

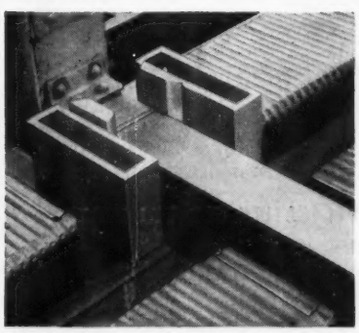
(Continued on page 106)

Revolutionary

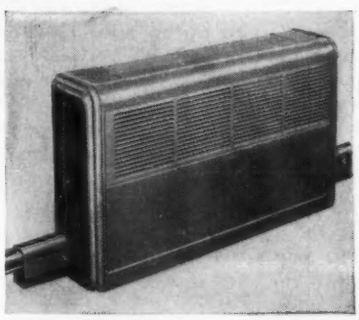
New Development in Air Conditioning for Hospitals



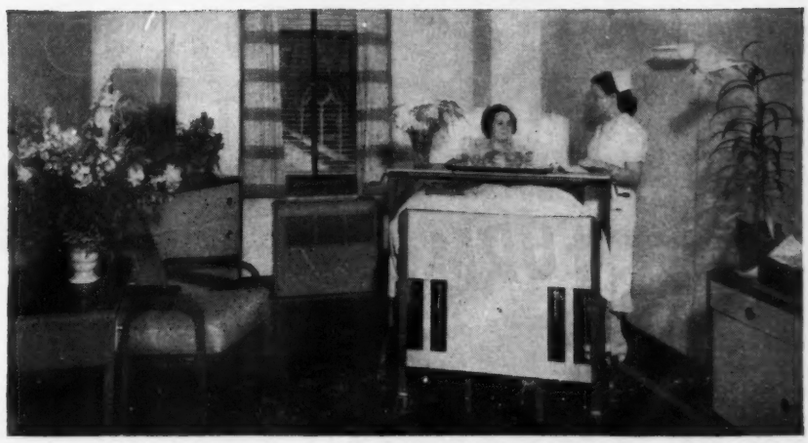
Simple and compact arrangement without moving parts, and induced air-flow are shown in this cross section drawing of Carrier Conduit Weathermaster.



(Above) Floor sleeves, much smaller than used for conventional risers, provide ample openings through floor for conduit, water pipes, and drain of Carrier Conduit Weathermaster System.



Individual room Weathermaster (above) receives high velocity conditioned air direct from outdoors. A turn of the dial sets the temperature desired and flow of hot or cold water through unit is automatically controlled. Air and water connections completely concealed. Unit has no moving parts—operation is noiseless.



Typical room in the new St. Francis Hospital, Peoria, Ill. *Architect:* Hamilton B. Dix. *Consulting Engineers:* Beling Eng. Co. *General Contractor:* V. Jobst & Sons. *Mechanical Contractor:* Crowley Bros. Carrier Weathermaster is installed under window.

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PATIENTS in the new St. Francis Hospital, Peoria, Ill., have a better chance for recovery, thanks to a revolutionary new development in air conditioning —the Carrier Conduit Weathermaster System.

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Reviews

(Continued from page 100)

This report, a part of the revised city plan being prepared by the City Plan Commission of St. Louis, faces frankly the fact that the modern city has not been built for a happy life. To improve the living qualities of the city, the Commission presents a program to meet the problems of leisure time. The role of small adult parks, large play areas, and school playgrounds is well understood in this study. However, the increasing existence of leisure time will require recreation centers of more diffused appeal than those planned by St. Louis. The encouragement of democratic cultural activities through community centers which are more than mere adjuncts of playing fields will help strengthen and vitalize our democracy.

The planning of permanent recreation centers requires careful analysis of local needs and community character changes, as well as an understanding of contemporary requirements. Uneconomic investments can permanently cripple an admirable program. Although this plan, if realized, would bring the new facilities within reach of every resident of the city, a shift in population from the depressed industrial areas would cause the abandonment of many centers unless they are coordinated with rebuilding programs.

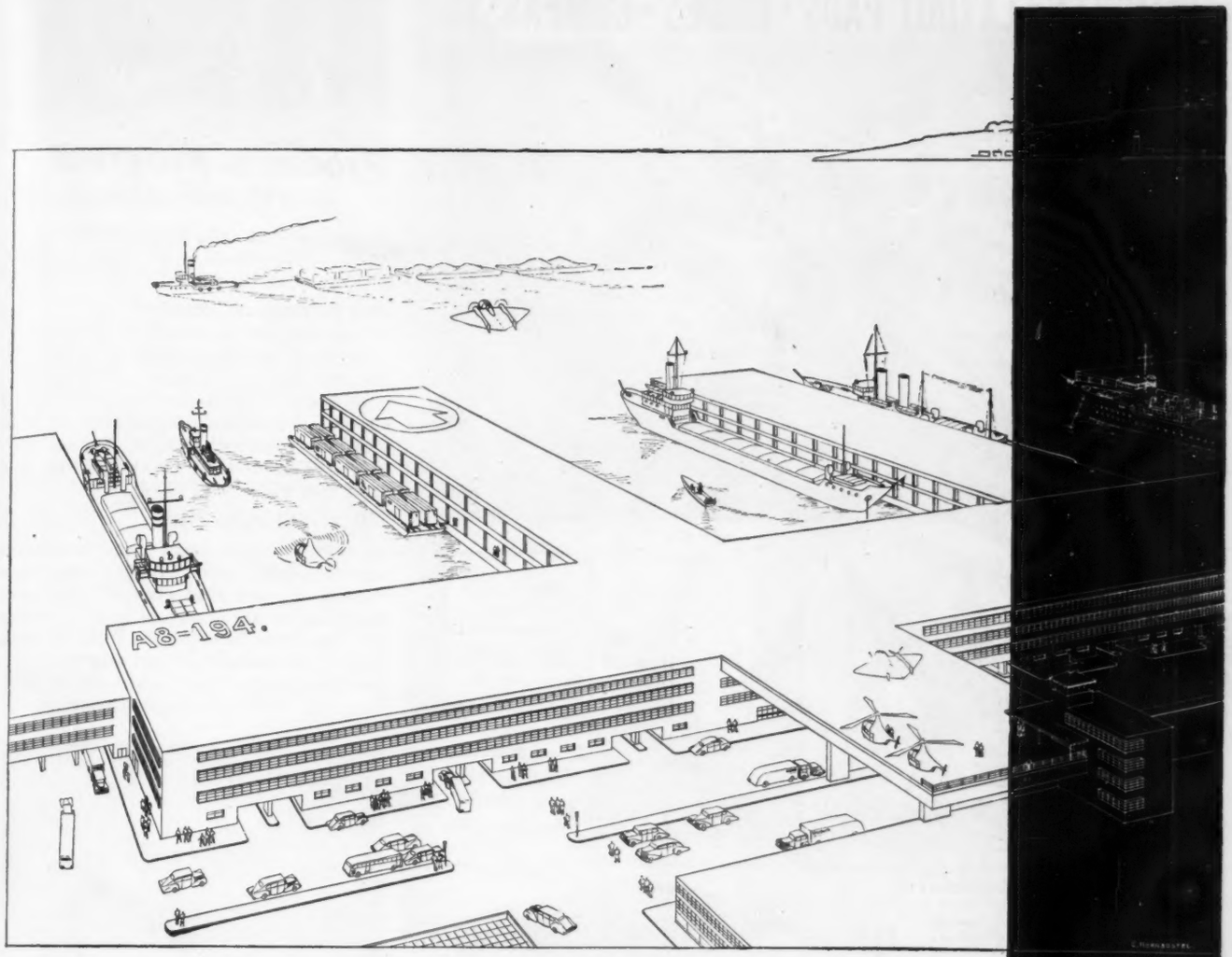
The narrow concept of recreation needs and the poor consideration of future changes in demand mar this well presented report. The era of rational city planning will require plans conceived with more depth of perception.

DECORATION FOR THE BEDRIDDEN

Hospital Color and Decoration, Raymond P. Sloan. Physicians' Record Company, Chicago. 1944. 253 pages.

For a decade white tile, brown floors and cream walls have been disappearing from the scene, succumbing to an appreciation of color values and new materials. This chatty book espouses the cause of color in the design and decoration of hospitals. Mr. Sloan tours the hospital from basement to roof, suggesting not only uses of color, but choice and arrangement of furniture and accessories. His aim in hospital decoration is cheerfulness and "hominess" with sufficient utility to ease the cure and care of the ill.

The author in his desire for a "homelike" atmosphere falls prey to many of the Grand Rapids decorating clichés. Attempts to develop "different" room treatments reveal his essentially narrow understanding of contemporary art and architecture. Though the book might provoke some useful thought in the minds of hospital officials, it could simultaneously freeze various styles of furnishing.



SHUTTLE AIRPORT IN 194X

Utilization of vast areas of space now wasted is one of the major developments that will distinguish post-war building and planning in metropolitan centers, according to Caleb Hornbostel, instructor of architecture at New York University and at Cooper Union.

"The building plan area of most American cities can be practically doubled," he explains, "by efficient utilization of roof areas." As one illustration of the many possibilities of converting waste space to use, he submits this functional roof plan for a section of a riverfront, economically converted for use as a shuttle airport.

With waiting rooms and loading platforms for freight and passenger shuttle service to main air terminals outside the city—with accommodations for handling and maintenance of planes ranging from jet-propelled liners to helicopter taxis and harbor-patrol flying boats, this shuttle station would solve a serious transportation problem of the future.

Barrett Specification Roofs, because of their complete adaptability, now make it possible for architects and city planners to execute many revolutionary improvements in living and housing conditions, after this war is won. For the dependable and versatile performance of these coal-tar pitch and felt roofs has already been proven on most of the famous modern buildings in America.

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The design shown here is seventh in the Barrett series of functional roof projects prepared by outstanding American architects. You are invited to write for reprints of the complete series, for your file.

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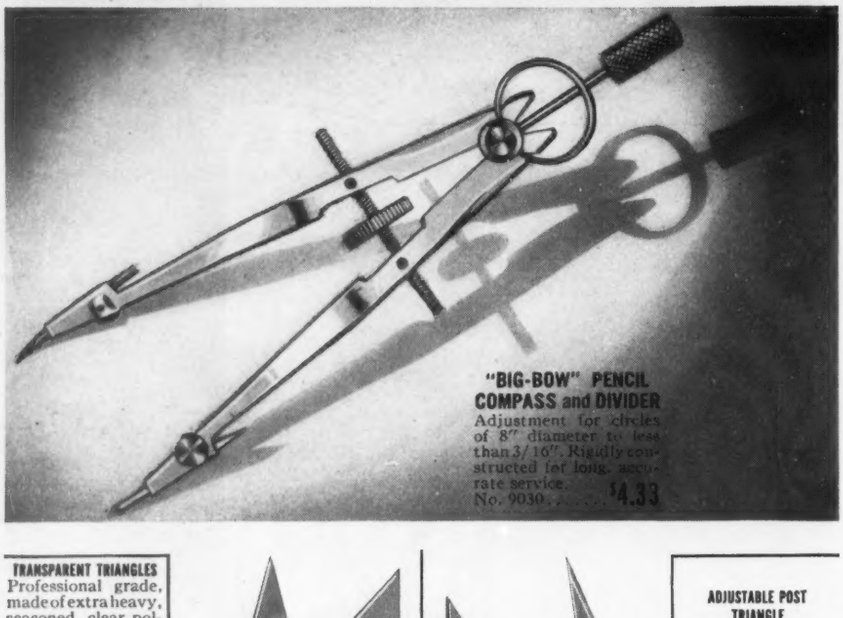

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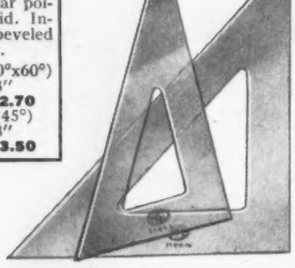

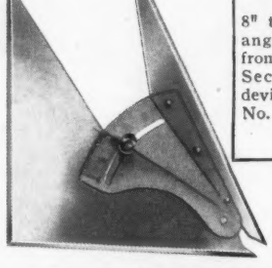

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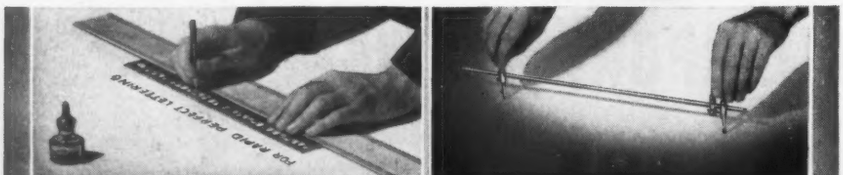

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News

Products Progress

(Continued from page 24)

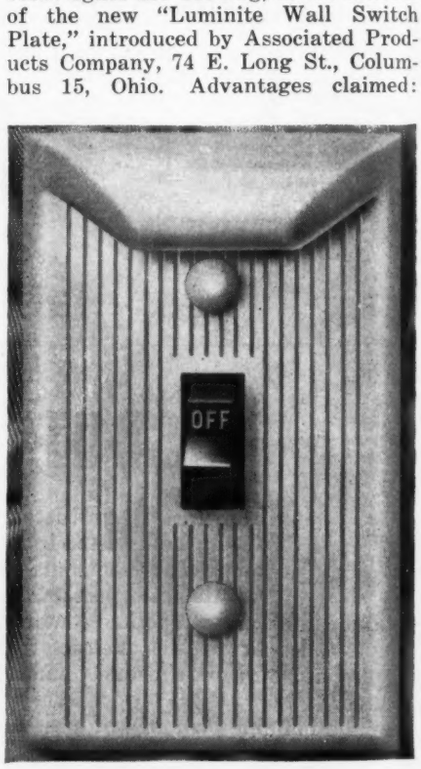
walls insuring free flushing of trapped solids; elimination of all waste spillage during cleaning period.

New Underground Lighting

A recent safety development in aviation is a new underground system of airport lighting, instead of floodlighting, designed by Henderson & Stallard of San Francisco. Runways are outlined in "ribbons" of light covered with non-skid glass that glows brightly but does not glare.

Lighted Wall Switch Plate

A tiny shielded light that comes on automatically when room lights are turned off, and that goes off whenever room lights are burning, is the feature of the new "Luminite Wall Switch Plate," introduced by Associated Products Company, 74 E. Long St., Columbus 15, Ohio. Advantages claimed:



makes the switch easy to locate in the dark; serves as a safety or pilot light at night; helps keep walls free of smudges and fingerprints; saves on light bills by indicating what lights (that can't be seen from the switch location) have inadvertently been left on, day or night; operates for less than two cents per year; fits any standard switch; works equally well in 3- and 4-way switch arrangements; installation is made by connecting two wires to switch terminals. Plate is molded in ivory plastic with housing at the top for the fractional-wattage glow lamp and mechanism.

(Continued on page 111)

News

Products Progress

(Continued from page 24)

New Insulation Wire

New insulation for power, lighting, and communication cable is announced by United States Rubber Company, Rockefeller Center, N. Y. City. "Nubun" is a synthetic rubber latex wire made from a special modification of buna S synthetic rubber and is said to be flexible, impermeable, of laminated construction; to have greater resistance to destructive forces causing circuit trouble; to be exceptionally homogeneous following vulcanization; to have high electrical characteristics such as dielectric strength and insulation resistance. It is suggested this synthetic insulation will be more easily replaced and serviced in fire alarm, wire and cable police communication systems, and telephonic systems.

Pre-Wax Floor Cleaner

DuPont Company, 350 Fifth Ave., N. Y. City, announces a new dirt-chaser, a heavy-bodied product about the consistency of heavy cream. It is said to provide a good base for subsequent waxing, setting up a "bite" on the surface to give the wax better adhesion. Only worn areas will need rewaxing after using the cleaner, since it is said to rejuvenate the wax finish.

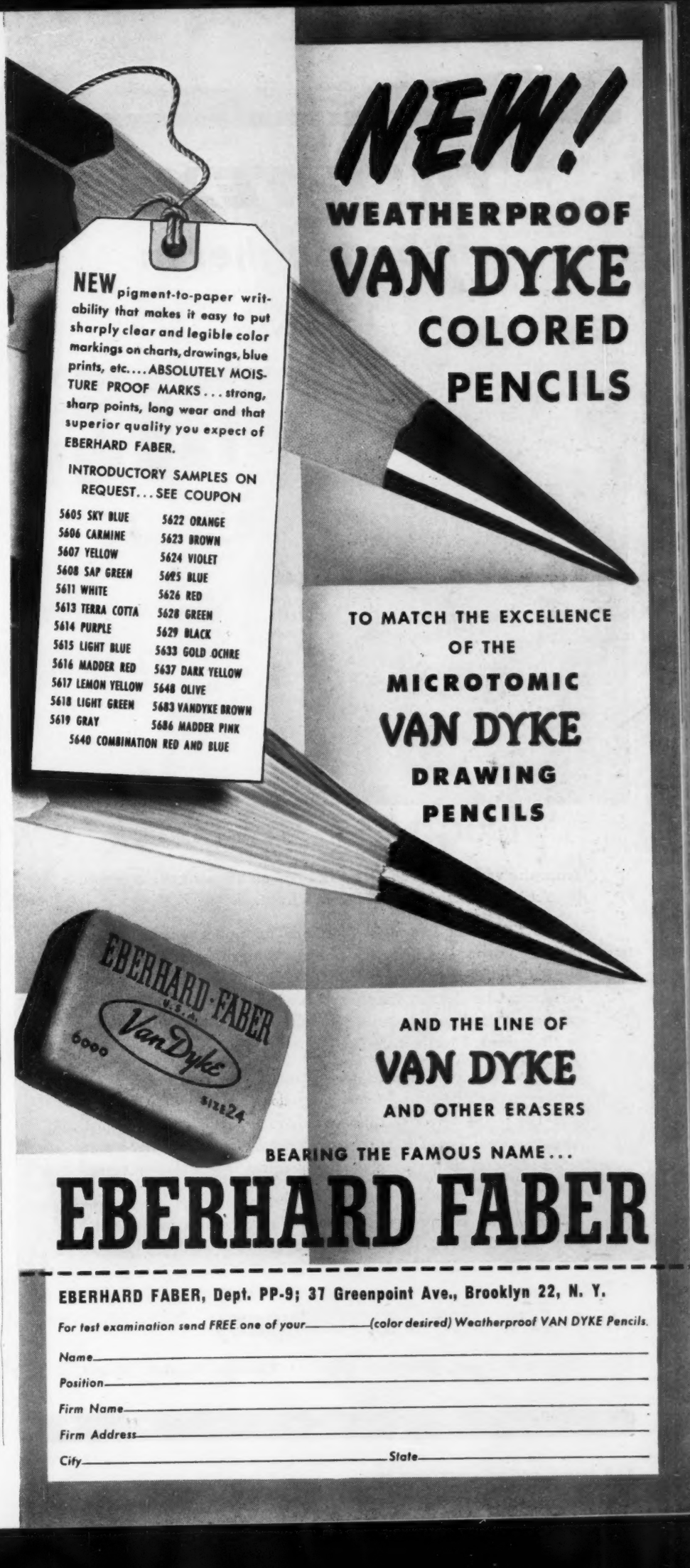
Improved Steel Chairs and Stools

New all-welded, tubular steel chairs and stools are available now, in swivel, adjustable, and non-adjustable models, from Royal Metal Manufacturing Company, 25 W. 26th Street, New York City 10. These are said to be designed to help the worker maintain good posture, to increase comfort and efficiency, to reduce fatigue; backrests are curved to fit properly the small of the back, and are mounted on spring steel adjustable uprights; seats are furnished in scroll (formed) and round type; seat material is non-splintering, oil-proofed Masonite.

Synthetic Glue

A new liquid resin glue which sets at ordinary room temperature is said to come close to being the ultimate in adhesives for wood. It is used with separate dry-powder catalyst; is called "Cascophen RS-216," and is manufactured by the Casein Company of America, 350 Madison Ave., New York City They claim: it can be stored indefinitely at room temperature; it has a marked "affinity" for wood, bonds at low pressures and on uneven surfaces; it cures in 8 or 10 hours at 70° F. or less at warmer temperatures; is boilproof and moldproof. "Cascophen RS-216" is rec-

(Continued on page 112)



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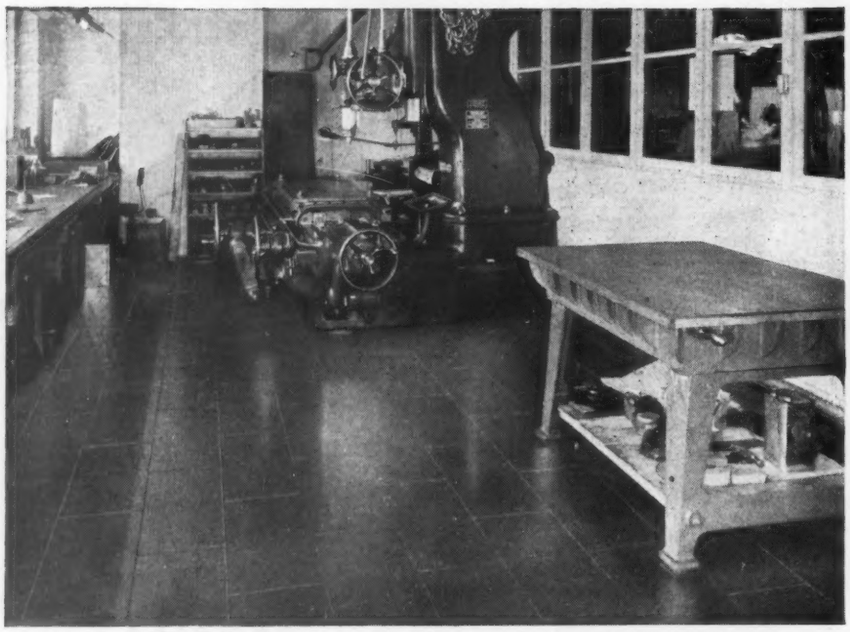

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News

Products Progress

(Continued from page 111)

ommended for work where durability is required and where joints cannot be heated, such as gluing of thick laminations for airplane propellers, heavy-duty built-up arches and beams, aircraft spars and assemblies, etc.

Mobile Sprinkler System

The automatic sprinkler system used in commercial buildings and factories has been adapted to a fire-fighting system for mobiles such as autos, trucks, buses, trains, tanks, bombers. Walter Kidde & Company of New York is doing the adapting.

All-Steel Fluorescent Reflector

A steel reflector for fluorescent industrial lighting, meeting all RLM requirements for reflectivity—shielding angle, contour, over-all efficiency—is announced by Bright Light Reflector Company, Metropolitan and Morgan Aves., Brooklyn 6, N. Y. The hood is fitted with rigid end-plates for bumpers to prevent sockets from breaking or being forced out of position. Knockouts are provided in the end-plates for bushings and locknuts when the units are joined together, and may also be used for pull switch. Provision has been made for addition of a third lamp for increased lighting; the ballast has been left exposed to provide natural air circulation and heat dissipation.

Plastic Scales

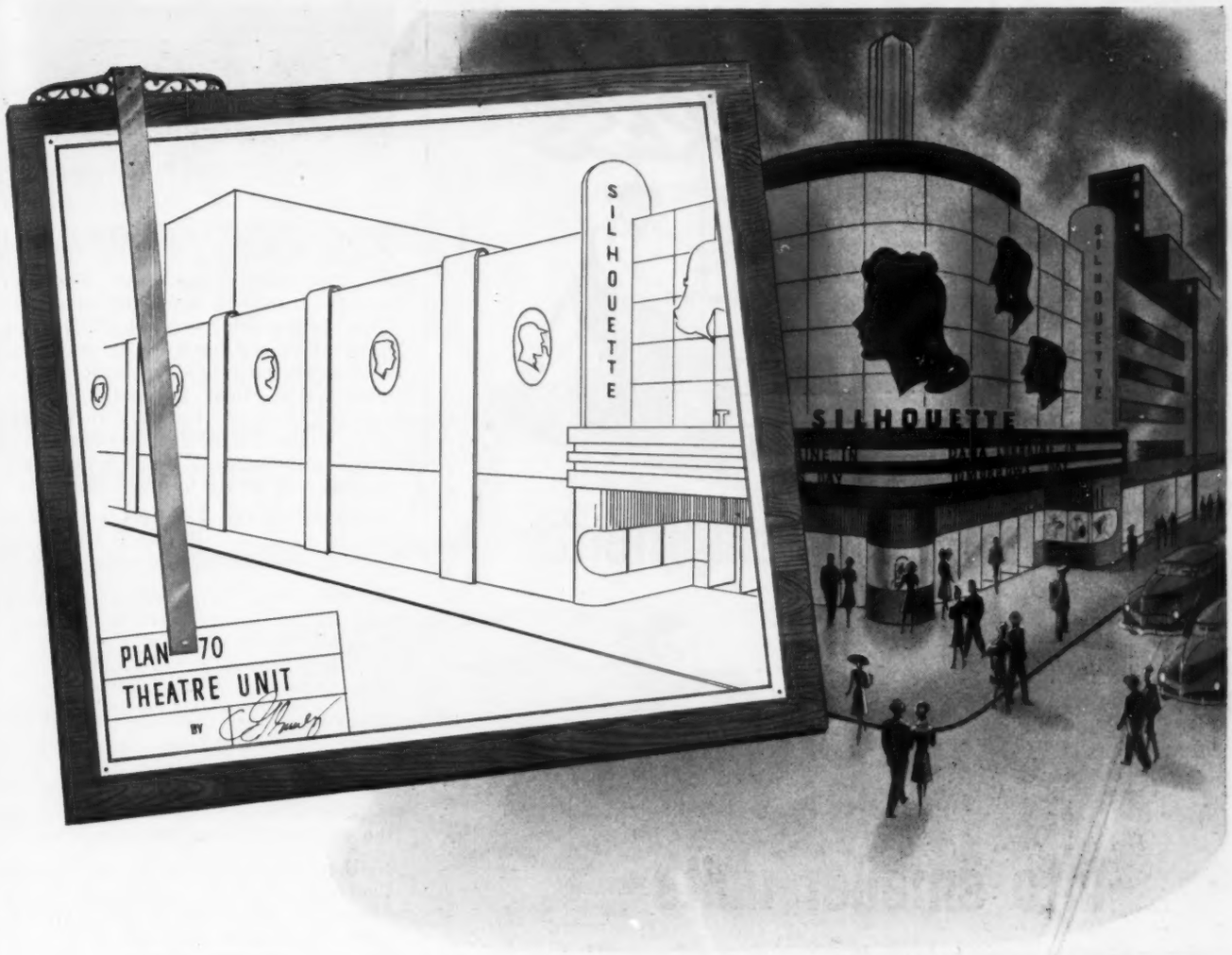
Architects' and engineers' scales made of injection-molded "Tenite" plastic are announced by Eastman Kodak Company, 10 E. 40th Street, N. Y. City. Scales are white with black lines and figures, and are said to be more accurate and less likely to warp than boxwood scales.

Colored Indelible Pencils

Reliance Pencil Corporation, 22 South 6th Ave., Mount Vernon, N. Y., after a study of writing problems in production departments, design and drafting rooms, etc., has created a colored indelible pencil said to be toughened and strengthened by means of a process of bonding lead and wood, something like lamination in plywood. The "Templar" pencil is recommended for checking purposes, map and chart coloring, production graphs, art work, etc.

Addendum

The calculator-protractor for wood workers mentioned in the June issue, manufactured by Greenlee Tool Company, 2136 12th Street, Rockford, Ill., costs ten cents.



Tomorrow's "Box-Office" Appeal

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Theatre management knows that "box-office" appeal depends almost as much on the theatre-goer's comfort as upon the film itself. They know, too, that postwar theatres without air conditioning will be as unpopular as silent films —and patronized as little.

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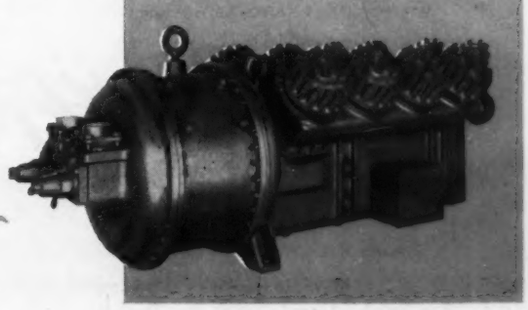

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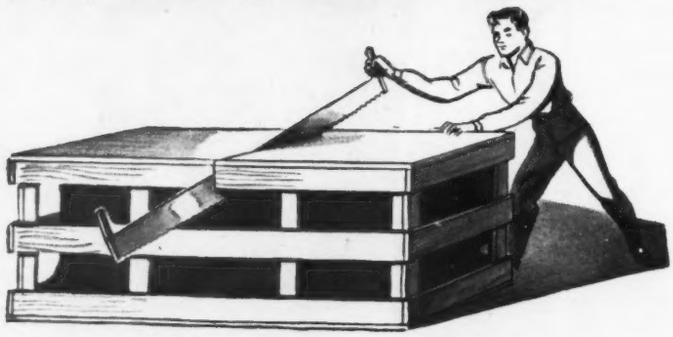

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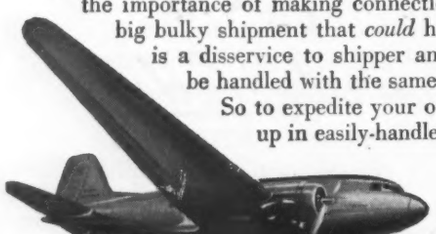
THE handling, loading, and unloading of AIR EXPRESS shipments is a speedy operation. Crews are well-trained and skillful. They know and appreciate the importance of making connections, quick delivery. That is why a big bulky shipment that *could* have been broken into smaller units is a disservice to shipper and receiver alike. It simply cannot be handled with the same speed given to ordinary shipments. So to expedite your own shipments be sure they're made up in easily-handled units whenever possible.



A Money-Saving, High-Speed Wartime Tool For Every Business

As a result of increased efficiency developed to meet wartime demands, rates have been reduced. Shippers nationwide are now saving an average of more than 10% on Air Express charges. And Air Express schedules are based on "hours", not days and weeks — with 3-mile-a-minute service direct to hundreds of U.S. cities and scores of foreign countries.

WRITE TODAY for "North, East, South, West"—an informative booklet that will stimulate the thinking of every executive. Dept. PR-9, Railway Express Agency, 230 Park Avenue, New York 17, N. Y., or ask for it at any local office.

AIR EXPRESS
Gets there FIRST

Phone RAILWAY EXPRESS AGENCY, AIR EXPRESS DIVISION
Representing the AIRLINES of the United States

Views

(Continued from page 18)

ful occupation not *primarily* concerned with profit-making."

General Contracting is a business only; the implication is apparent. The General Contractor is *primarily* concerned with profit-making—with brokering the labor of others *for his own profit.* If that profit may be increased by misleading the client to accept inferior building products contrary to the advice of his Architect, the Contractor may in all too many instances consider himself the better businessman.

It is time for the Architectural Profession to dispense with this and all other conscienceless parasites.

To this end, the postwar Architect must return to his province of Master Builder—boldly, confidently, and for the satisfaction to be gained from the *complete* protection of his Client.

In all businesses there are worthy and unworthy competitors. The conscientious General Contractor of the good old days is fast disappearing, and the modern General Contractor has become the Architect's unworthy competitor.

Neither the old nor the modern General Contractor has ever presented to the Client the attributes of the Architectural Profession, nor has either displayed a competent interest in the finer horizons of life.

The modern General Contractor, having experienced a degree of success in competing with the Architect, and having met no rebuff, is now prepared to *employ* the Architect in the postwar period. It is his purpose to broker the Architect's labors to the Client, and thus remove the Architect as an obstacle on the path to *greater profit.*

The Profession of Architecture, *not* primarily concerned with profit-making, *is* concerned with the creation and development of structural beauty throughout these United States, with the planning of our cities, with well conceived communities for those now living, and for posterity.

It is concerned with good taste, convenience, durability, and suitability, in roads, bridges, monuments, and buildings civic and national, industrial structures, office buildings, transport stations, the collective and individual abodes of American families, and their buildings for education and religious worship. It is concerned with slum clearance, sanitation, health, buildings and parks where children may play, in structures where adults may enjoy the theater, the arts, music, and the dance, and in proper buildings for the aged and the infirm.

(Continued on page 116)

Among the numerous postwar buildings now being planned are many psychiatric hospitals and many general hospitals with psychiatric wards.

Therefore, we feel the time is opportune to invite your special attention to the postwar line of Fenestra Steel Psychiatric Windows.

First of all, these windows will afford, in greater abundance, each of the "three great essentials demanded of all windows": daylight, fresh air and its control, and see-through vision. Their extra large areas will help create that "open" feeling so important to the welfare of mental cases.

Likewise of singular importance in the mental hospital or ward is window safety—the safety provided patients by windows whose ventilator openings are restricted.

But Fenestra Psychiatric Windows will also provide maximum safety for the hospital staff, including the maintenance people. For example, Fenestra Screens will be attached on the outside safely from the inside; and both sides of the glass will be washed safely from within a room . . . The partial list of important Fenestra features, at the right, is worthy of your special study.

Please feel entirely free to call on us for advance information about the various types of "specific purpose" Fenestra Steel Windows, for various types of buildings. They will all be available soon after the war is won.

DETROIT STEEL PRODUCTS COMPANY

Now Chiefly Engaged in War Goods Manufacture

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Pacific Coast Plant, Oakland, California

REMEMBER THESE ADVANTAGES OF FENESTRA STEEL PSYCHIATRIC WINDOWS

MORE DAYLIGHT—less frame, more glass.

BETTER SEE-THROUGH VISION—window bars and guards eliminated.

BETTER VENTILATION AND CONTROL OF IT—tilt-in vents serve as built-in windguards. When open, deflect drafts upward, shed rain to outside.

INCREASED SAFETY—vent openings restricted.

EASIER OPENING—steel vents never warp, swell or stick. Also they swing instead of slide.

SAFER WASHING—both sides of glass washed from inside a room.

BETTER SCREENS—attached or removed quickly, safely, from the inside.

ADDED FIRESAFETY—steel does not burn.

SUPERIOR WEATHER-TIGHTNESS—precision-fitted by craftsmen, unaffected by weather-changes, they stay tight.

GREATER BEAUTY—architectural beauty is enhanced by the neat, narrow lines of the steel windows, and by their attractive hardware appointments.

★ Fenestra ★

HOSPITAL WINDOWS

Views

(Continued from page 114)

The Architectural Profession is interested in the control of the Client's expenditures, that they may not be too much nor too little for what he desires; for the Client cannot afford to spend more than a stipulated sum; neither can he afford to spend less than what is required to achieve the results which he wishes to attain.

Nevertheless, it is but sane that the Profession of Architecture be gainful to a degree. The services rendered by the Architect must not approximate the nature of charity, nor must their range and value be vague. He must determine his charges, like other professional men, with rational business sense.

Every man is worthy of his hire for work conscientiously performed. Likewise, the men of the building trades are worthy of their hire for the performance of good work, executed in a workmanlike manner.

In other professions and businesses there are services to be rendered, each with its price. The Client must pay his doctor, his dentist, and his attorney for their services. He may not ride upon a street car, bus, railroad train, or aeroplane without payment. This he understands thoroughly; it has been his lifelong custom.

But in his contact with the Architect, this Client with whom we deal, who expects to pay for what he receives, who must, many of us complain, be *educated* concerning the functions of the Architect—has been *taught by us* to unlearn the lessons of life.

In the services of the Architect, he is startled to discover something of a bastard nature, neither profession nor business, through which he may obtain advice and perhaps even preliminary drawings *without pay*. He has naturally come to regard these services—like all other things which have no price—as *without value*.

The General Contractor has seized upon this impression as an opportunity to further his own interest. He has said to the prospective Client: "If you will give me the contract to build your house, I will make your plans *free*. You will not need an Architect." This has been countered by the Architect, when advised of that proposal by the prospective Client, with: "If you will pay me for *my* services the sum the General Contractor asks for his, I will give you your *building* free—for in either case you are paying for both building and plans."

As to the "free plans" which are offered by manufacturers of building products, is it possible that those products are of so low a grade that a premium must be offered to effect their sale?

It is notable that manufacturers of better products do not find it necessary to resort to tricks in order to find a market. "Free plans" from General Contractor or Manufacturer present a most unpleasant B.O. to the nostrils of the Architect.

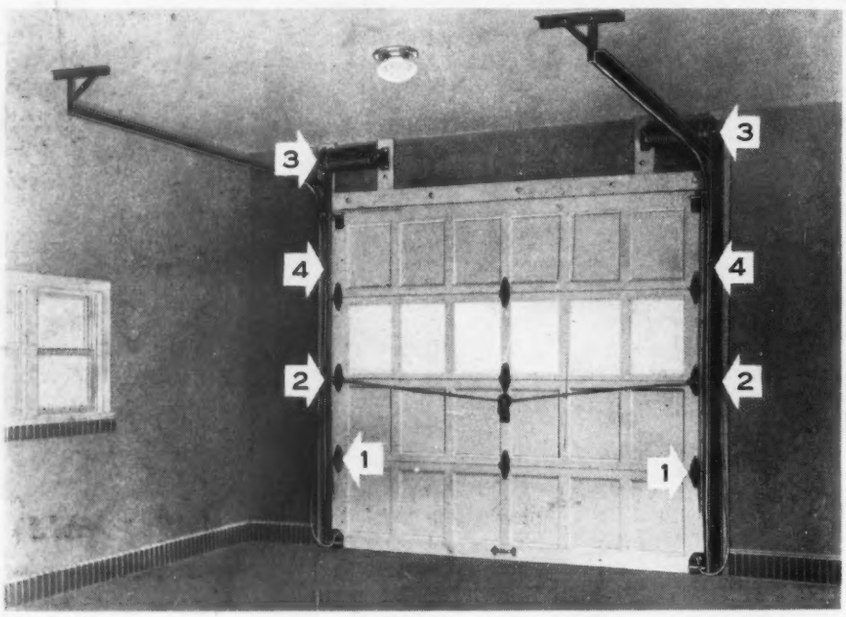
Hard-hitting, straight-shooting Architect C. Julian Oberwarth of Frankfort, Kentucky, believes we should first try cooperation with the producer, the retailer, and the contractor.

His spirit of fairness and decency is to be admired, and he may be able to accomplish just what he is aiming at. But such a spirit has not been successful for a long period—it wasn't successful at Munich—and it is understood that the growth of weeds in a garden cannot be prevented by pruning them.

They must be pulled out by the roots.

Architect Oberwarth is a man of accomplishments, not the least of which is having been instrumental in obtaining more than 1,000 new members for the A.I.A. (of which he is Membership

(Continued on page 118)



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has All of these features:

1. **Weathertight, rattleproof closing without sticking or binding. Roller-crank action.**
2. **Self-latching. Spring bolts engage automatically when closing.**
3. **Tailored "Twin Torsion" balance springs. Safe and quiet. Neat appearance.**
4. **Continuous vertical track brackets on all doors. Rigid. Conceal and protect cable.**

BARCOL

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY

100 MILL ST. • ROCKFORD, ILL.

THERE'S only one kind of screen test in the South Pacific—just ask a Navy man who chaperons a frisky PT boat on nightly forays against the enemy, and daytimes fights tropic damp and boredom in a hidden hut.

That's the non-Hollywood screen test against disease-carrying insects . . . against damp, rust and corrosion. The armed forces' screen test against all the destructive elements of Nature that made LUMITE a new star . . . on the world's fighting fronts.

For LUMITE is the new plastic screen, woven from Saran*, that laughs at heat, cold, rain, snow, acid fumes and salt air; says "no!" to rust and corrosion, and "yes!" to longer life.

American men will be coming home from battle fronts *sold already* on LUMITE plastic window screening for their homes . . . offices . . . plants. Because they'll have proved to themselves by experience, the tough durability of LUMITE under every conceivable adverse condition.

Tomorrow's postwar product is being pre-sold to millions of Americans! Tomorrow's postwar market ready at hand for "cease firing!"

*A product of the Dow Chemical Co.

TESTED IN WAR READY FOR PEACE

- ★ Will not rust or corrode . . . long-lasting
- ★ Non-staining . . . no streaking of sills or sidewalls
- ★ Strong, resilient . . . no dents or bulges
- ★ Unaffected by fumes or salt air
- ★ Translucent . . . admits more daylight
- ★ Non-inflammable
- ★ Will be competitively priced

Memo to Architects and Engineers: Include LUMITE New Plastic Window Screens in your postwar plans for home, factories, offices, schools! Write *now* for detailed information.

The new plastic screen cloth

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Chicopee Manufacturing Corp., *Sales Office:* 40 Worth St., New York 13, N. Y.

World's Largest Makers of Plastic Screen Cloth

"DEMAND THE BEST!"

J. S. STAEDTLER, INC.
51-55 WORTH STREET
NEW YORK, N.Y.

Views

(Continued from page 116)

Secretary); and he is going out for 12,000 more. He is taking on the fight against "free plans" which mislead the prospective Client into the belief that they are *complete* plans and specifications prepared in the Client's interest, whereas they are but a bait with which to sell inferior products at great profit.

We of the Architectural Profession have long been appeasers, with the result that we are being attacked on more than one front. Notwithstanding the encroachments of the General Contractor upon the province of the Architect, the Profession adheres to the method of requesting through this same General Contractor proposals for the work of the trades.

Let us take care of these unworthy competitors in proper order. Let us dispense with the General Contractor and become again the Master Builders, whereafter we may readily eliminate the peddlers of inferior products from our work.

And are not we of the Architectural Profession responsible for the dilemma of the Building Trades, whom we have permitted to become mere pawns in the hands of the General Contractor? Are not the costs of estimating work, which the Building Trades *fail to obtain accurately*, pyramiding the cost of building which the postwar Client will have to pay?

It is no small item, the *cost of unsuccessful estimates* prepared by the Building Trades; that useless cost constitutes not only an added expense to the Client, but also an injustice to the Tradesman.

To elucidate: these Building Tradesmen give their time and effort to the analysis of the Architect-Engineer's complex plans and specifications, computing required quantities of materials, costs and discounts, transportation of carload and less-car-load lots, trucking costs, shop costs, man-hours of labor to be performed, and the ever-present overhead. In many estimates for up-to-date buildings, it is first necessary to produce engineering drawings from which to determine both quantities and costs.

Fred. A. Weisenbach, Regional Manager of York Corporation, writes: "I have long been an advocate of manufacturers being paid a fee for bidding on a job, but naturally that is something that could only come about by an agreement between all manufacturers, and possibly the Government bureaus might have something to say about it. However, it is perfectly ridiculous on many jobs for several manufacturers to bid, wherein the expense involved is appre-

(Continued on page 120)

FLOORS
that act as
GIANT
MIRRORS

Light-Reflecting Floors made with Atlas White cement increase effectiveness of industrial lighting.

When war demanded faster production in American factories, engineers added a new function to industrial floors. Large in size and closest to working areas, floors made with Atlas *White* cement (instead of *gray* cement) act as giant reflectors of light, augmenting the well-known effectiveness of light-colored walls and ceilings.

Light-Reflecting Floors made with Atlas White cement have proved their value wherever installed. In one bomber plant tests showed a 61% increase in light reflection compared to an adjacent gray-cement floor under identical lighting. They break up shadows, put more light on working surfaces, and improve seeing on all jobs. Because they are made of Atlas White cement, their reflection value is lasting.

For full information on Light-Reflecting Floors, including results of lighting surveys and experience of maintenance engineers, ask for the booklet "Light From Floors." Write to Atlas White Bureau, Universal Atlas Cement Co. (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

HOW ABOUT MAINTENANCE?

Experience shows white-cement floors are easy to clean, easy to keep clean, and retain their reflection advantage. Maintenance is simple—frequent sweeping, occasional damp mopping, periodic scrubbing.

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WHITE CEMENT
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36,000 neighbors live in the 12,272 Metropolitan Life Insurance Company apartments that make up Parkchester.

World's most modern floors prove superior in world's largest housing development

After five years of continuous wear, Nairn Veltone Pattern #2924 in this typical Parkchester kitchen is fresh, beautiful—like new.

12,272 Parkchester kitchens, a veritable city of linoleum, have demonstrated that floors can be beautiful as well as durable. Five years ago, Nairn Linoleum was installed in all the 12,272 Parkchester kitchens. Today, those floors are just as beautiful, quiet, easy to clean as ever. And in these five years not a single replacement nor repair has been required. At Parkchester, the most modern of floors, Nairn Linoleum, has been previewed and pre-tested for your postwar buildings.

A handbook on linoleum specifications has been prepared for your use. May we send you your copy?

CONGOLEUM-NAIRN INC., Kearny, N. J.

For modern floors and walls

NAIRN LINOLEUM

easy to maintain, colorful, permanent, resilient.

HILLYARD HIGH QUALITY PRODUCTS PROPERLY PROTECT ALL TYPES OF FLOORS, GIVE LASTING SATISFACTION IN UNIFORMITY, DEPENDABILITY AND ECONOMY. *Send for Specification Cards.*

There is a Hillyard Floor Treatment Engineer in your locality, he will gladly give advice and recommendations on any maintenance problem, call or wire us today, no obligation.

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HILLYARD FLOOR TREATMENTS
and Maintenance Products
FLOOR SEALS, FINISHES, CLEANERS, WAXES
Tested and Approved!

Views

(Continued from page 118)

ciable. I can cite numerous air-conditioning jobs where the preparation of the bid by each manufacturer could not have been less than $5,000, and possibly closer to $10,000, and we know that only one could be successful; therefore the balance had to absorb this bidding expense in future jobs, or else go broke."

Thus do costs of building pyramid, and thus will our future Clients be compelled, under this stupid system, to pay for work previously performed for others. Thus also will postwar construction become prohibitive in cost, unless we of the Architectural Profession adopt a method of procedure which will assure our Clients that they will pay only for what they get—and get what they pay for.

Under the present uneconomic system—to which the Architect affords tacit approval—when all the Tradesmen have gathered together the information necessary for making a proposal against a submission deadline, the multitude of items must be checked and re-checked, totalled, the estimated profit added, the proposal prepared, and *delivered to the General Contractor free of charge.*

It is submitted that the ills of the Architect's current procedure must be remedied. A common-sense and business-like basis must be substituted.

The prospective Client will pay for the Architect's advice, and for all time and effort expended in his behalf—no more, no less.

The Architect will become the Master Builder.

The Building Trades will be paid for estimates prepared for the Client, who shall *not* absorb the costs of estimates prepared for others.

The Building Trades will be paid for the work they do for the Client—and paid directly by the Client, for their mutual protection—and the Architect must *know* that their bills are correct when he subscribes to their payment.

The Master Builder shall schedule the progress of the work in conference with the Tradesmen.

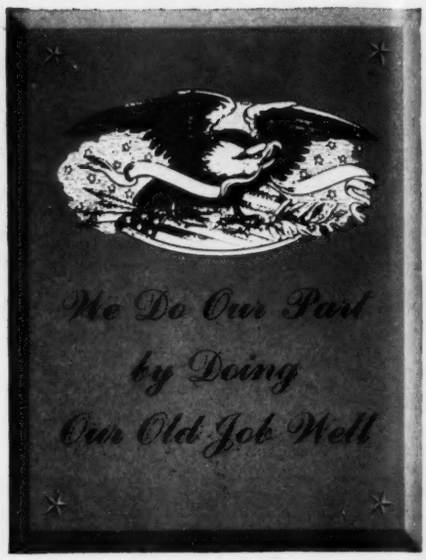
The Master Builder shall build within the time and cost stipulated.

There shall be no more of the iniquitous "bid contract" system in private work.

The "cost plus" system employed by the General Contractor shall not be revived; its stench has not yet been forgotten from World War I.

The type of contract to be adopted is to be based on administration by the Architect—*without* the General Contractor.

(Continued on page 122)



DURING these critical times we found that our best service to our country consisted in doing well the job for which we were best qualified. That meant turning out, in great quantity, wires, cables, conduits, connectors and other items of the highest quality, to serve directly and indirectly, every branch of the armed forces. With victory and peace, we can again render old and new customers the service for which National Electric has always been noted.

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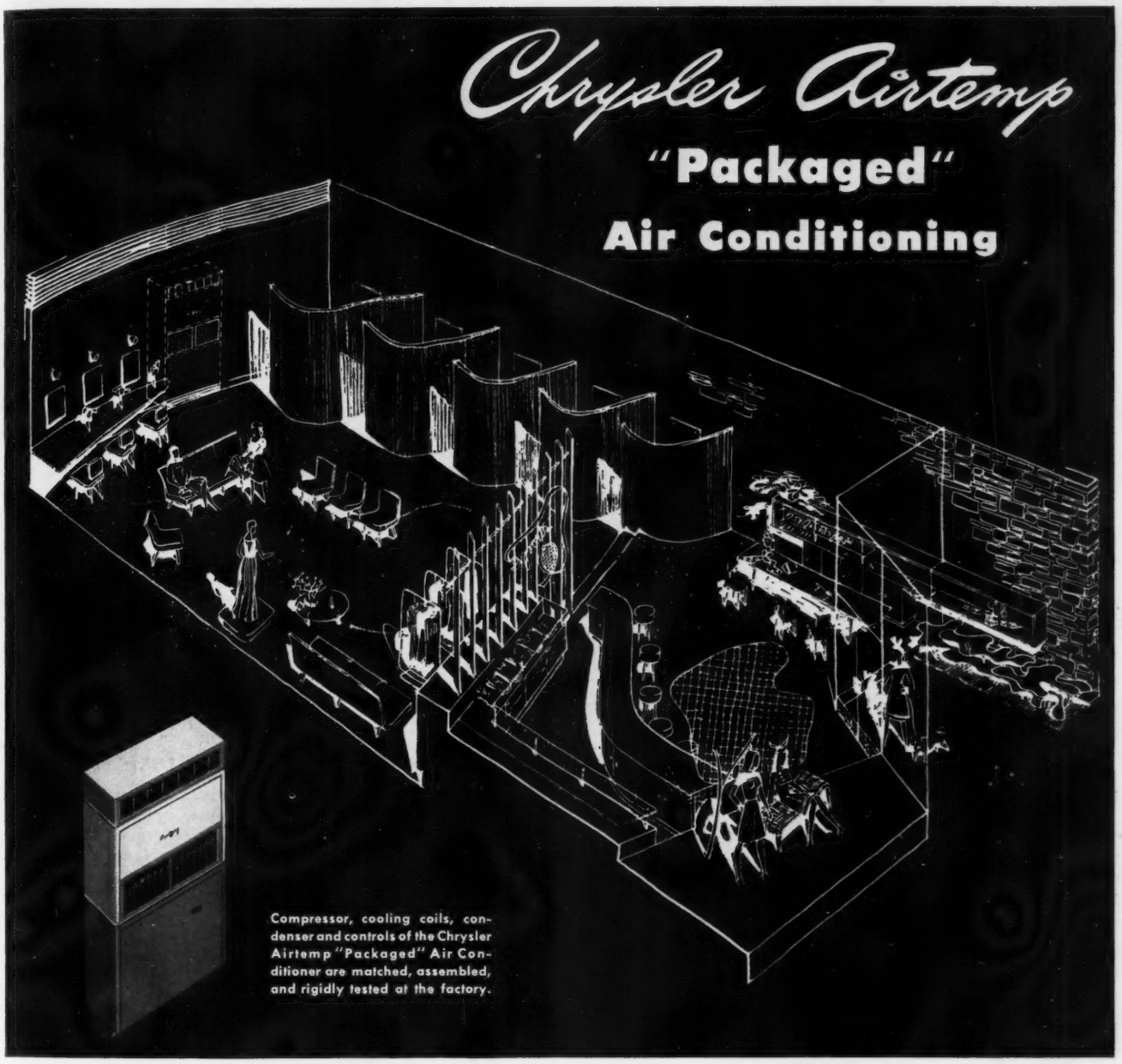
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"Packaged"
Air Conditioning
Compressor, cooling coils, condenser and controls of the Chrysler Airtemp "Packaged" Air Conditioner are matched, assembled, and rigidly tested at the factory.

A Boon to Apparel Shops

In the postwar period, the public will demand the comfort and refreshing atmosphere of air conditioning in apparel shops, particularly.

Alert merchants are specifying air conditioning in their postwar building and modernization programs. And Chrysler Airtemp "Packaged" Air Conditioners, singly or in multiple, are ideal in meeting temperature-humidity requirements. In combination with a Chrysler Airtemp Percolator Boiler, the "Packaged" Air Conditioner will provide year 'round indoor climate control, plus adequate hot water, an important item in stores.

Completely assembled at the factory and shipped ready to run, these self-contained units provide quiet, trouble-free, dependable air conditioning. Easy to install, easy to move as a show case, Chrysler Airtemp "Packaged" Air Conditioners are winning high endorsement among the Nation's leading architects.

Chrysler Airtemp will be glad to cooperate with you in making estimates on not only air conditioning, but also domestic heating and commercial refrigeration. Airtemp Division of Chrysler Corporation, Dayton, Ohio. • In Canada, Therm-O-Rite Products, Limited.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p. m., E. W. T.

CHRYSLER AIRTEMP

HEATING • COOLING • REFRIGERATION

Views

(Continued from page 120)

AN ARCHITECT DISPENSES WITH THE GENERAL CONTRACTOR

Dear Editor:

Mr. Poggi's discussion in your magazine and the excellent talk of Mr. Wormser to the N. Y. Chapter, A.I.A., on the subject of the General Contractor-VS-The Architect has interested me greatly.

I am in hearty agreement with their contentions and I regret to state that unless architects as a group shake themselves out of their lethargy (unfortunately there are many who either refuse to do so or who cannot see the handwriting on the wall), we will all find that sooner or later the general contractors will take the ground out from under our feet and we will be chasing the will-o'-the-wisp.

For many years I have advocated that the architect take full responsibility for a construction job from inception to completion—obtaining estimates, negotiating and awarding all the sub-contracts, issuing payments and supervising the job, in addition to all his other duties as the architect. This should and of right ought to be the proper function of an architect—not to lose his responsibility and identity once he has completed the plans and specifications by having the client award the project to a general contractor who, after all, is only a broker who in turn farms out the various parts of the job to the subcontractors, and from then on proceeds to ignore the architect if he can, and place the client within his power at every opportunity.

For many years I have handled most of my projects on the basis mentioned above, eliminating the general contractor. I can say without equivocation that I have found this method both interesting and full of responsibility which I have both sought and enjoyed. I have also been able to meet and make personal contact with all of the subcontractors on a project. I am glad to say they have always indicated that they would prefer to do business with an architect rather than with a general contractor, both for financial and contractual relations.

Greatly to my own satisfaction I found that I was able to command more respect from the subcontractor and the client, to whom, in the final analysis the tremendous savings obtained by the elimination of the general contractor were greatly welcome. In addition the client was relieved of the fear of inveiglement by the contractor; this fear, I must admit, is in the mind of many a client when about to enter into a building project.

In conclusion may I say that I have found this system eminently successful —the jobs running along smoothly with no difficulties at all, or such that did arise easily disposed of because of direct dealing with all of the building trades.

Who said architects cannot perform the functions of a general contractor? But I will say: Architects—wake up before it is too late.

B. H. WHINSTON, Architect
New York, N. Y.

An Architect at War

The name of Wilbur S. Corkran of the U. S. Army Corps of Engineers was not included among the servicemen from the profession listed in the several preceding issues of PENCIL POINTS, because of the inadvertent omission of his name from the letter sent by the Delaware A.I.A., of which he has been a member for many years.

NOTICES

JAMES C. HEMPHILL, A.I.A., who has been occupied with war work for various Government departments, announces the re-opening of his office at 506 Hodges Building, Greenwood, S. C. He expects to re-open his former office at 206-207 Carolina Life Building, Columbia, S. C. when private building is no longer restricted, and maintain both offices.

ROBERT M. LITTLE, A.I.A., announces the opening of his offices at 605 Lincoln Road, Miami Beach, Fla., Suite 711.

ABRAHAM H. OKUN, Architect-Engineer, announces the removal of his office from #4 Lakewood Avenue to 162 Broadway, Monticello 2, N. Y.

ARCHITECTURAL DRAFTSMEN WANTED

Thoroughly experienced draftsman capable of preparing preliminary sketches, working drawings, etc., familiar with all phases architectural drafting, wanted for work on postwar municipal and state projects. Excellent opportunity for permanent position. Office located 60 miles from New York City. Write C/O PENCIL POINTS, Box No. 21, giving education, experience, salary desired, and draft status.

Architectural draftsman, capable of making complete architectural drawings from scale sketches, wanted by rural architect in New York State. Write C/O PENCIL POINTS, Box No. 22, giving education, experience, salary desired, and draft status.

Architectural draftsmen wanted for permanent employment on private work in Omaha, Nebraska. Write C/O PENCIL POINTS, Box No. 23, giving education, experience, and salary desired.

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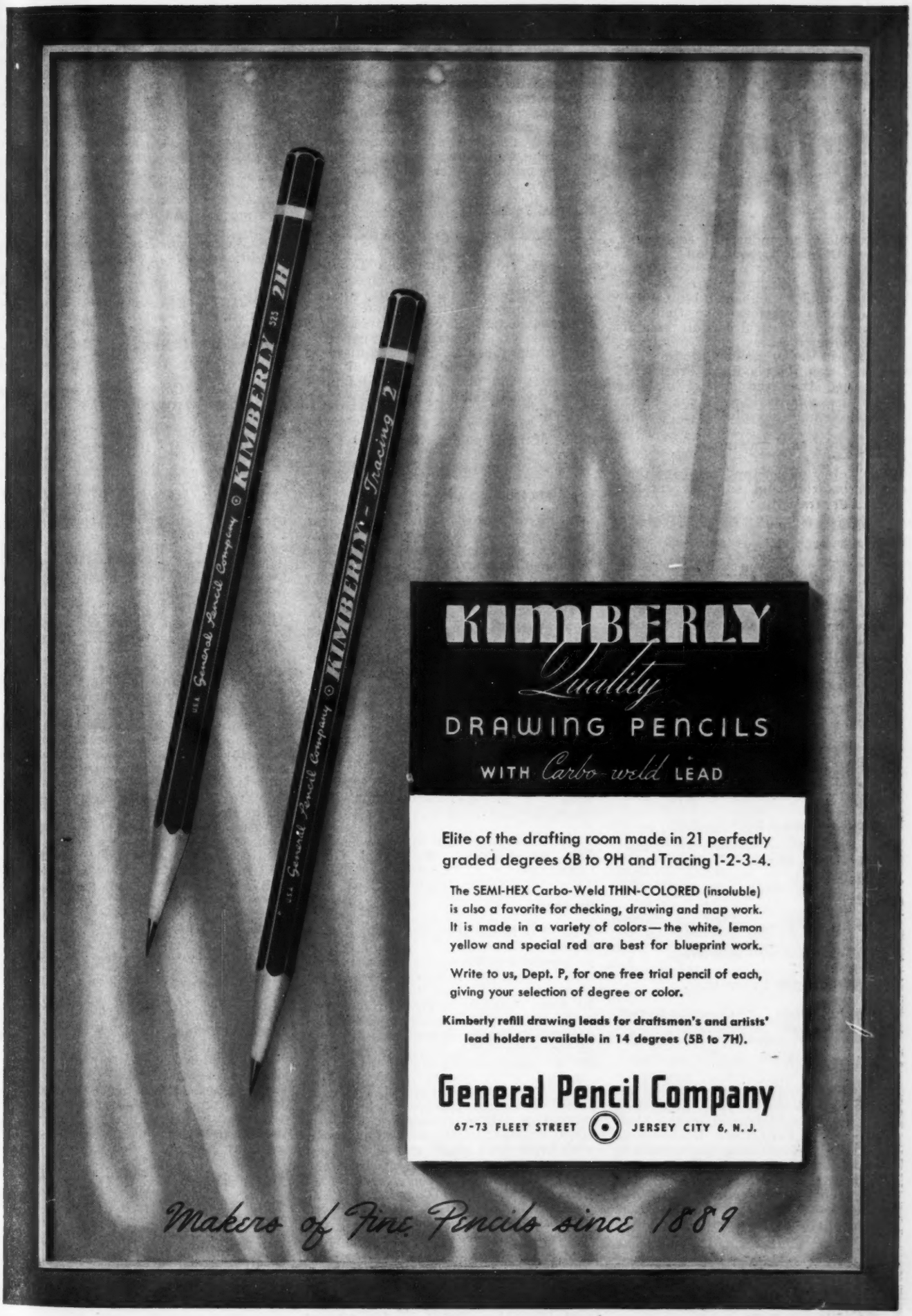
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Elite of the drafting room made in 21 perfectly graded degrees 6B to 9H and Tracing 1-2-3-4.
The SEMI-HEX Carbo-Weld THIN-COLORED (insoluble) is also a favorite for checking, drawing and map work. It is made in a variety of colors—the white, lemon yellow and special red are best for blueprint work.
Write to us, Dept. P, for one free trial pencil of each, giving your selection of degree or color.
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Manufacturers' Literature

Air Conditioning

1-05. Folder on industrial equipment, 8 pages, Carrier Corporation.

1-07. *Conduit Weathermaster System,* 20-page booklet published by Carrier Corporation, describes operation and advantages of vertical conduit, conduit above ceilings, guest room unit, etc., as installed in the air conditioning system in Washington's Hotel Statler. It is claimed that the special building advantages and savings of the system made it possible to build two additional floors in the same amount of space. Photographs and drawings.

1-06. Refrigeration and air conditioning accessories and supplies catalog, York Corporation.

Air Express

1-08. *Air Express Now and Tomorrow,* a 12-page booklet, 7¾" x 9¼" from Railway Express Agency, presents facts about the growth and development of air express, as well as answers to some questions about its future. It may be of interest to those who require high-speed transportation in connection with their business.

Caulking

3-08. *Weatherproof Caulking* (A.I.A. File No. 7d), Minwax Company, Inc.

Cement

Lone Star Cement Corporation:

3-09. *Heavy Duty Floors with "Incor" 24-Hour Cement.*

Concrete

3-10. *Cutting Concrete Costs.*

3-11. *Cold-Weather Concreting.*

3-12. *Watertight Concrete.*

3-13. *Why People Like Concrete Homes,* Portland Cement Association.

Conveyors

3-14. "The best time to eliminate unproductive motion in your production set-up is while it is still in the blueprint stage," says *Case Histories to Aid You in Blueprinting Conversion to Peace,* from the Lamson Corporation. This 24-page illustrated booklet states 17 problems—with solutions, results, and post-war applications—solved by use of conveyors to handle production materials in plants.

Doors

4-04. *Modernfold Doors for Homes,* New Castle Products.

4-05. Roddis Lumber & Veneer Company claims to have made doors in wood of every conceivable type of construction and architectural design. Their 16-page booklet, *Doors by Roddis,* gives information on many types—interior, exterior, sound-resistant, stile and rail, fireproof, unit (door, screen, frame, buck, trim, etc.)—together with detailed drawings and specifications.

Electrical Equipment

5-07. *Electrical Guide to the Post-War Home,* a 16-page consumer booklet, 5⅜" x 8½", urges American families to understand the growing dependence of every home on its electrical wiring system and to blueprint adequate wiring for construction of new or rebuilding of old houses. Adequate circuit capacity for lighting, radios, home appliances, ventilation, is considered a vital part of layout and planning. Booklet published by National Adequate Wiring Bureau.

5-06. *More Capacity,* Square D Company.

Fire Alarms

6-06. *Fire Alarm Signaling Systems and Apparatus, Bulletin No. 1044,* Stanley and Patterson Division of Schwarze Electric Company.

Floors

6-07. *Floor Treatment and Maintenance Job Specifications,* a group of 14 sheets from the architectural department of the Hillyard Company, lists practical specifications and suggestions on treatment and maintenance of floors—terrazzo, cement, wood, quarry tile, rubber, asphalt, gymnasium, linoleum, Masonite.

Glass

7-04. *Thermopane,* Libby-Owens-Ford Glass Company.

7-05. *Magnalite Diffusing Glass* (A.I.A. File 26 A 526), Mississippi Glass Company.

Heating

8-16. The latest development in a completely self-contained, automatic, oil or gas fired boiler and burner combination is described in *Cyclotherm Steam Generator,* an 8-page, illustrated booklet from Ames Iron Works. The unit may also function as a hot water generator. An outline dimensional drawing of the generator is given, as well as a list of equipment for it.

8-17. The "Bison" compact boiler in steel, of welded construction, said to require a minimum amount of floor space, comes complete, ready for piping, with brick work eliminated in all types except oil fired; smoke outlet in the rear. Standard sizes range from capacities of 1800 to 42,500 square feet of steam radiation. Specifications on hand or mechanically fired boilers are given in *Bison Steel Heating Boilers, Catalog No. 3* (24 pages, illustrated) from Farrar and Trefts, Inc.

Fitzgibbons Boiler Company:

8-09. *Fitzgibbons 400 Series Hand Fired Steel Boiler* (A.I.A. File No. 30-C-1) (for small homes).

8-10. *Fitzgibbons 400 Series* (for small homes).

8-11. *Fitzgibbons Steel Heating Boilers "D" Type* (A.I.A. File No. 30-C-1) (for all heating systems).

8-12. *Fitzgibbons Directaire Direct-Fired Air Conditioners for Residential Heating* (A.I.A. File No. 30-C-1).

8-13. *Fitzgibbons Steel Boilers and Air Conditioners (1944 edition).*

8-06. *Catalog TW-95c* (A.I.A. File No. 29-D-2), 4 pages, Kewanee Boiler Corporation.

8-07. *Central Heating,* Ric-wil Company.

8-08. *Rocop Convectors, Catalog No. 140,* Rome-Turney Radiator Company.

8-14. *H. B. Smith Boilers for Factory Installations,* H. B. Smith Company, Inc.

8-18. *Low Pressure Sectional Cast Iron Boilers* for heating, air conditioning, service hot water, and process steam, a 12-page booklet from the H. B. Smith Company, Inc., illustrates and gives data on three types of low pressure boilers for residential, commercial, and industrial heating.

8-15. *Sturtevant Heavy Duty Heaters* (Catalog No. 462), B. F. Sturtevant Company.

8-19. *Performance Facts,* 76 pages, is a booklet from Warren Webster & Company giving case studies on 268 modern steam heating installations. It also describes a moderator steam heat system which claims to make low radiator temperatures possible by using the principle of turbulence—metering steam into radiators at high velocity—changes in the steam supply and turbulence rate varying the heat delivered from each radiator. An "outdoor thermostat" actuates a central control which speeds up or slows heat delivery according to the fall or rise of outdoor temperatures. Also described is an electrically-operated central control for a moderator system suitable in general for medium to large-size buildings heated by two-pipe orificed systems using low pressure steam from any source.

8-20. *Modine Vertical Delivery Unit Heaters, Bulletin* 144, from Modine Manufacturing Company contains 8 pages of descriptive data on the new lines of copper condenser heaters, including size and steam and hot water performance tables. Also incorporated is engineering information on low outlet temperature models designed for use on steam pressures of 30 pounds and greater.

Insulation

9-01. *What Formica Is,* Formica Insulation Company.

9-03. A portfolio of data sheets showing proper application of insulation in many types of construction is published by the Wood Conversion Company. The original portfolio is a file folder cover

in which are 15 of the original set of data sheets. Several sheets cover specific problems of attic insulation application; one discusses use of attic fans; another illustrates how to insulate and ventilate a flat roof deck properly. Architects and contractors are invited to send in their problems which, if found to have general application, will be answered in additional data sheets.

Lighting

12-07. *Supplement No. 1 to GEA-3203 E* (on fluorescent fixtures), General Electric Company.

Maintenance

13-01. *Modern Maintenance Methods*, A. C. Horn Company.

13-03. *From Foundation to Flagpole*, L. Sonneborn Sons, Inc.

Miscellaneous

13-04. A wartime catalog, *Majestic Building Necessities*, from the Majestic Company lists: attic ventilators, basement sash, coal chutes (foundation and grade line types), bell trap cess pools, cistern rings and covers, doors (access, ash pit, cleanout, laundry chute), ash pit dumps, fireplace equipment, flue thimbles, garbage receivers, foundation and ventilating grates, incinerators (fuelless, gas, coal or wood), built-in mail boxes, milk and package receivers, porch column bases, sewer tile strainers, ventilating bricks, wheel guards, window wells. 20 pages, illustrated.

Paint

16-07. Folder on flat wall finish, A. C. Horn Company.

Pattern and Model Making

16-10. *How to Make Patterns and Models with Gypsum Cement*, United States Gypsum Company.

Pigments

16-11. *The ABC of Luminescence*, New Jersey Zinc Company.

Piping

16-12. Information on how pipe and tube can best be used in commercial and residential buildings now being planned is given in a 24-page illustrated booklet, *Revere Pipe and Tube*, from Revere Copper and Brass, Inc. Through its technical advisory service, this firm is prepared to cooperate with architects and others in applications of their various products—red-brass pipe, copper pipe, copper tube, "Dryseal" tube. Standard dimensions, weights, and properties of each are listed.

Plumbing Fixtures

16-03. *Douglas Folders*, The John Douglas Company.

Plywood

16-09. *Beautiful Wood for Beautiful Homes*, Mengel Company and United States Plywood Corporation.

Steel

19-11. *Armco Hangar Buildings*, American Rolling Mill Company.

Temperature Control

20-05. A new 44-page catalog on thermal control, *Thermoswitches for Complete Temperature Regulation*, is issued by Fenwal, Inc., describing (with photos, drawings, charts) a line of standard temperature and pressure control apparatus. General details are given on the "Thermoswitch," said to be based on entirely new principles of heat and cold control in which expansion or contraction of the shell causes contact action. Various types have been designed for the control of temperatures of solids, gases, and liquids. "Thermoswitch" is said to be applicable throughout the entire range of temperature control work from sub-zero to 1200° F. New adaptations have been added for aircraft and railway use.

Tile

20-04. *Facts About Tile* is a 20-page booklet from the Tile Manufacturers' Association, Inc., said to "remind you of some of the things you have always known about ceramic tile," and illustrating tile as used in various types of interiors and exteriors. Stating that "Your architect is the man who will show you how to 'stretch your dollars' without sacrificing performance and satisfaction . . . His judgment is *unbiased*," the booklet gives pertinent information on the history of tile, its cost, installation, care, modern uses, etc. A list of member companies with their addresses is given.

Waterproofing

23-09. *Raincoats for Building Exteriors*, A. C. Horn Company.

Water Softener

23-10. *Permutit Spiractor Bulletin 2384*, Permutit Company.

Windows

23-05. *Bayley Windows, Doors, Operators*, (A.I.A. File No. 16-e), William Bayley Company.

Mesker Brothers:

23-06. *Book of School Windows* (A.I.A. File No. 16e1).

23-07. *Book of Hospital Windows* (A.I.A. File No. 16e1).

23-08. *Book of Windows for Homes.*

Wood Preservers

Abesto Manufacturing Company:

23-11. *Abesto Wood Preservers.*

Waterproofing, Roofing & Flashing

23-12. *Abesto Cold Application Material for Damp Proofing, Built-Up Roofs, Roof Covering.*

23-13. *Abesto with Viscoroid Base.*

23-14. *Specification "A"—New Abesto Built-Up Roof; Specification "B"—Abesto Damp Proofing.*

23-15. *Specification "C"—Abesto Cold Cap Sheeting on Old Roofs; Specification "D"—Abesto Used for Re-Coat Work.*

23-16. *Specification "E"—Blind Nailing Using Abesto Products; Specification "F"—Flashing with Abesto Quick-Setting Plastic.*

23-17. *Specification "G"—Built-Up Roof Over Old Smooth Surfaced Roof With Abesto; Specification "H"—Abesto Built-Up Construction on Concrete Deck.*

LITERATURE, SAMPLES WANTED

JOHN R. WEBER, 415 Lexington Avenue, New York 17, N. Y. (Data, samples, and catalogs for A.I.A. file).

EUGENE D. DRUMMOND, A.I.A., Architect-Engineer, P.O. Box 162, 301 First Federal Building, Jackson, Mississippi (Data, samples, catalogs for A.I.A. file).

ABRAHAM H. OKUN, Architect-Engineer, 162 Broadway, Monticello, N. Y. (Data, samples, catalogs for A.I.A. file).

NORMAN M. DAHL, Architect, Massachusetts General Hospital, Boston, Mass. (Data, samples, catalogs for A.I.A. file).

GENERAL PANEL CORPORATION, 103 Park Ave., New York 17, N. Y. (Data, samples, catalogs for A.I.A. file, and any items of interest in the prefabrication of buildings and panels).

ROBERT M. LITTLE, Architect, A.I.A., 605 Lincoln Rd., Miami Beach, Fla., Suite 711 (Data, samples, catalogs for A.I.A. file).

Pencil Points, 330 West 42nd St., New York 18, N. Y.
I should like a copy of each piece of Manufacturers' Literature listed.
We request students to send their inquiries directly to the manufacturers.

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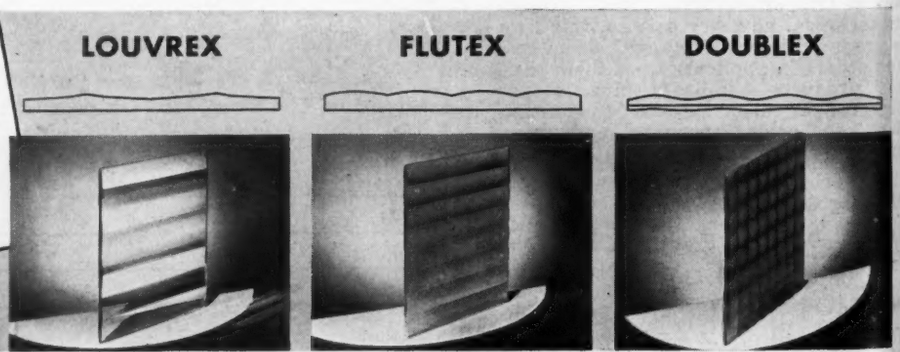

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